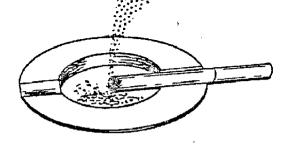


Federal Trade Commission

Report of

"TAR", NICOTINE AND CARBON
MONOXIDE OF THE SMOKE
OF 200 VARIETIES
OF CIGARETTES



DECEMBER 1981

REPORT OF "TAR", NICOTINE AND CARBON MONOXIDE CONTENT OF THE SMOKE OF 200 VARIETIES OF CIGARETTES

December 1981

The Federal Trade Commission's Laboratory has determined the "tar" (dry particulate matter), total alkaloid (reported as nicotine) and carbon monoxide content of 200 varieties of cigarettes. The laboratory utilized the Cambridge filter method with the following specifications as set forth in the Commission's announcement of July 31, 1967:

- Smoke cigarettes to a 23 mm. butt length, or to the length of the filter and overwrap plus 3 mm. if in excess of 23 mm.
- Base results on a test of approximately 100 cigarettes per brand, or type.
- Cigarettes to be tested will be selected on a random basis, as opposed to "weight selection".
- 4. Determine particulate matter on a "dry" basis employing the gas chromatography method published by C. H. Sloan and B. J. Sublett in Tobacco Science 9, page 70, 1965, as modified by F. J. Schultz' and A. W. Spears' report published in Tobacco Vol. 162, No. 24, page 32, dated June 17, 1966, to determine the moisture content.
- 5. Determine and report the "tar" content after subtracting moisture and alkaloids (as nicotine) from particulate matter.
- Carbon Monoxide is determined by non-dispersal infrared spectrophotometer.

Concerning the 200 varieties tested, 15 were capable of being smoked to 23 mm. The butt length of the other 185 varieties tested ranged from 24.1 mm. to an average of between 46.6 to 50.0 mm. The butt lengths of 159 of the 200 varieties tested exceed 30 mm.

The samples used were obtained by attempting to purchase two packages of each variety of cigarettes as distributed by domestic cigarette manufacturers during March and April 1981 in each of 50 geographic locations throughout the country. All varieties of cigarettes were not available in each of the 50 geographic locations and in these instances, one or more additional packages of cigarettes

were purchased in those geographic locations where respective varieties were available. The samples utilized in the tests were representative of the 200 varieties of cigarettes as available throughout the country at the time of purchase.

In the table listing the cigarette varieties in alphabetical order the "tar" and carbon monoxide content is reported to the nearest 1/10 milligram and the nicotine to the nearest 1/100 milligram, each with appropriate statistical values. The average weight is reported in grams per cigarette and the butt length range to the nearest 1/10 millimeter. In all other tables the average weight and butt length columns and the figures representing the standard deviation of the mean have been eliminated. The "tar" and carbon monoxide figures have been rounded to the nearest milligram (0.5 milligrams and greater rounded up, 0.4 milligrams and less rounded down) and the nicotine figures have been rounded to the nearest tenth of a milligram (0.05 milligrams and greater rounded up, 0.04 milligrams and less rounded down). Three tables respectively list varieties in increasing order of "tar" values, in increasing order of nicotine values and in increasing order or carbon monoxide values. Accordingly, "tar", nicotine and carbon monoxide figures in the tables and list represent rounded off averages without indication of their precision.

A group of cigarette companies has filed a complaint with the Commission alleging that the current cigarette testing methodology does not accurately assess the "tar" and nicotine that Barclay cigarettes deliver relative to the "tar" and nicotine that other cigarette brands deliver. The complainant cigarette companies further allege that Barclay, a 1 mg. cigarette under the current FTC method, delivers more "tar" to the smoker than do other 1 mg. "tar" cigarette brands.

The complainant cigarette companies state that a cigarette manufacturer can reduce the "tar" delivery of a cigarette by a variety of different methods. One way to decrease "tar" delivery involves diluting the cigarette smoke inhaled with air brought into the filter through some form of ventilation. The higher the percentage diluted air inhaled, the lower the "tar" delivery. Methods to increase the amount of ventilation or air dilution vary from brand to brand. Many low "tar" cigarettes have a filter surrounded by porous paper with one or more rows of ventilating holes encircling the filter. When the filter is puffed, air enters the filter through the ventilation holes where it mixes with the smoke.

In the Barclay filter, air entering the ventilation holes travels to the smoker's mouth through four grooves in the filter. The complainant cigarette companies allege that when consumers smoke Barclay cigarettes, the four grooves either collapse or are in some way blocked. When tested in the FTC laboratory using the current cigarette holder, however, the companies allege that the grooves do not collapse and are not blocked. Thus, it is contended that the Commission's current testing methodology does not accurately measure the relative level of "tar" delivered by Barclay to smokers when

compared with other 1 mg. "tar" cigarettes. The Commission is currently investigating these allegations, and has not made a final determination on the merits of this complaint. An asterisk is appended to the test scores included in this report that this investigation may affect.

It also should be noted that cigarette brands which recorded "tar" scores below 0.5 mg., nicotine below 0.05 mg. and carbon monoxide below 0.5 mg. per cigarette in this test are recorded in the accompanying tables as < 0.5 mg. "tar," < 0.05 mg. nicotine and < 0.5 mg. carbon monoxide. The tables do not differentiate between these cigarettes because the current, approved testing methodology is not sensitive enough to differentiate between cigarettes at these levels.

F44.1115	TYPE(3		AVERAGE WEIGHT(4)	BUTT LENGTH(5)	TPM DRY(1)*	NICOTINE*	CARBON MONOX LDE
BRAND	iire(-	''	#Bronr(4)	Daff Ethotis(2)	THE DRIVEY.	HICOIING.	HOMORIDE
Alpine	F. M. SP.	85mm	0.9753	28.1 - 29.5mm	13.9 + 0.5	0.89 ± 0.02	13.4 ± 0.5
American hights 120's	F. SP.	120mm	1.1550	46.6 - 50.Cpm	7.7 + 0.3	0.70 + 0.02	B.5 7 0.4
American Lights 120's	F. M. SP.	120mm	1.1983	47.0 - 48.4mm	7.5 + 0.3	0.67 + 0.03	8.4 + 0.4
Arctic Lights	F. M. SP.	85mm	1.0191	31.5 - 34.0mm	7.5 + 0.4	0.65 ± 0.02	8.5 + 0.4
Arctic Lights 100's	F. M. SP.	100mm	1.1659	32.8 - 36.8mm	7.4 + 0.4	0.64 ± 0.03	9.2 + 0.4
Barglay 6/	r. Hr.	80ınm	0.8249	33.8 - 36.5mm	0.7 + 0.2	0.15 + 0.02	1.0 + 0.2
Barclay 6/	F. SP.	85mm	0.8482	33,6 - 36.1mm	0.8 + 0.4	0.15 ± 0.03	1.1 + 0.2
Barclay 100's 6/	F. SP.	100mm	1.0673	37.6 - 39.9mm	2.2 + 0.2	0.26 + 0.02	2.2 + 0.2
Belair	F. M. SP.	8.5 mm	0.9531	31.6 - 33.9mm	8.2 + 0.3	0.72 + 0.02	9.1 7 0.4
Belair 100's	F. M. SP.	100mm	1.1394	37.2 - 39.5mm	8.4 ± 0.3	0.64 ± 0.02	10.1 ± 0.5
Benson & Hedges	Reg. F. HP.	70mm	0.9696	32.4 - 33.8mm	**	0.10 + 0.02	1.2 + 0.1
Benson & Hedges	F. IIP.	8 5 mm	1.0332	31.8 - 33.4mm	14.9 + 0.4	1.18 + 0.03	12.3 + 0.3
Benson & Hedges 100's	F. HP.	100mm	1.1087	33.6 - 35.5mm	16.0 ± 0.5	1.07 ± 0.04	15.6 + 0.4
Benson & Hedges 100's	F. M. HP.	100mm	1,1168	33.8 - 35.8mm	15.6 ± 0.5	1.05 + 0.03	15.0 ± 0.5
Benson & Hedges 100's	F. SP.	100mm	1.1123	32.8 - 35.5mm	16.4 ± 0.4	1.09 + 0.03	16.3 + 0.4
Benson & Hedges 100's	F. M. SP.	100mm	1.1304	33.9 - 35.4mm	15.8 ± 0.4	1.06 ± 0.03	16.6 + 0.4
Benson & Hedges Lights 100's	F. HP.	100mm	1.0905	37.9 - 40.0mm	10.4 + 0.3	0.74 + 0.02	11,3 + 0.4
Benson & Hedges Lights 100's	F. M. UP.	100mm	1.1176	38.5 - 39.6mm	9.8 ± 0.1	0.72 ± 0.02	10.6 ± 0.3
Benson & Hedges Lights 100's	F. SP.	100mm	1.1423	37.9 - 39.9mm	10.3 + 0.2	0.75 ± 0.02	12.9 + 0.4
Benson & Hedges Lights 100's	F. M. SP.	100mm	1.1225	37.5 ~ 40.0mm	9.9 + 0.5	0.73 ± 0.02	11.9 + 0.5
Bull Durham	F. SP.	85nm	1.2040	26.0 - 27.3mm	29.1 + 0.6	1.94 + 0.05	23.8 + 0.6
Cambridge	F. IIP.	85mm	0.8695	38.3 - 39.5mm	**	## 0102	**
Cambridge	F. SP.	85mm	0.8534	34.4 - 35.2mm	**	0.11 + 0.01	1.1 + 0.1
Cambridge 100's	F. SP.	100mm	0.9935	37.5 - 40.3mm	2.9 + 0.3	0.31 ± 0.02	4.8 + 0.3
Camel	Reg. NF. SP.	70mm	0.8755	2.3mm	20.6 + 0.6	1.42 + 0.03	12.5 + 0.5
Came 1	F. SP.	85mm	0.9712	26.9 - 28.0mm	16.0 + 0.5	1.18 + 0.03	16.0 + 0.7
Camel Lights	F. HP.	80mm	0.9109	29.0 - 30.7mm	6.5 + 0.3	0.63 ± 0.03	6.6 + 0.4
Camel Lights	F. SP.	85nva	0.9594	32.1 - 33.6min	7.7 + 0.4	0.71 + 0.03	10.1 + 0.5
Comel Lights	F. SP.	100min	1.1467	33.6 - 37.6mm	11.6 + 0.4	0.86 + 0.05	14.5 + 0.5
Carlton	F. RP.	85mm	0.8161	36.8 - 40.Òmm	***	4.00 ± 0.03	7417 - 013
Carlton	F, SP.	85mm	0.8172	32.0 - 35.0mm	**	0.11 + 0.01	1.3 + 0.1
Carlton	r. M. Sp.	85mm	0.7916	31.9 - 34.2mm	**	0.08 + 0.01	0.8 + 0.1
Carlton 100's	r. n. se.		1.0042	36.3 - 39.2mm	**	0.08 + 0.01	0.6 + 0.1
	r. nr. r. sp.	100mm				0.37 + 0.02	5.6 + 0.3
Carlton 100's		100mm .	0.9357	33.4 - 37.3mm ·	3.6 ± 0.4		****
Carlton 100's	F. H. SP.	100nm	0.9306	33.3 - 36.5mm	1 L T 0.3	0.34 ± 0.02	4.4 + 0.4
Chesterfield	Reg NF SP	70mm	0.8647	23mm	20.6 + 0.5	1.32 ± 0.03	13.2 ± 0.5
Chesterfield	HF. SP.	85mm	1.0443	2 3mm	24.8 ± 0.9	1.66 ± 0.04	16.1 ± 0.6
Chesterfield	F. SP.	85mm	0.9023	27.6 - 29.0mm	14.7 ± 0.4	1.04 ± 0.03	15.1 + 0.4
Chesterfield 101	F. SP.	101mm	1.0558	34.2 - 38.2mm	15.3 ± 0.6	1.11 ± 0.06	16.3 ± 0.6
Decade	F. SP.	85mm	0.8530	33.1 - 34.1mm	4.6 ± 0.3	0.44 ± 0.01	4.4 ± 0.2
Decade	F. M. SP.	85mm	0.8598	31.8 - 33.9mm	4.6 ± 0.2	0.44 ± 0.02	4.2 ± 0.3
Decade 100's	F. SP.	t 00mm	0.9571	37.4 - 38.Bam	0.3 ± 0.3	0.82 ± 0.01	7.3 ± 0.2
Doral II	F. SP.	6 Smm	1.0752	35.5 - 37.4mm	3.6 ± 0.3	0.38 ± 0.02	3.2 ± 0.2
Docal H	F. M. SP.	85mm	1.0438	35.7 - 37.5mm	3.8 ± 0.3	0.41 ± 0.03	3.5 ± 0.3

¹ TPM dry (tar) - milligrams total particulate matter less nicotine and water.

² Milligrams total alkaloids reported as nicotine.

J F-filter; NF-non-filter; M-menthol; NP-hard pack; SP-soft pack; mm-millimeter.

⁴ Average weight reported in grams.

⁵ Range used in butt length because of variance of overwrap.

^{*} Tolerance shown is twice the standard deviation.

^{**} Below the sensitivity of the method,

⁶ See statement in text concerning Barclay.

			AVERAGE				CARBON
BRAND	TYPE (3)	_ WEIGHT(4) .	BUTT LENGTH (5)	TPM DRY(1)*	NICOTINE*	MONOXIDE
Dullaurier	F. 11P.	85mm	0.9880	28.1 - 29.5mm	15.4 + 0.5	1.04 + 0.03	17.0 + 0.5
English Ovals	Reg. NF. HP.	70mm	0.9363	23mm	22.7 + 0.7	1.66 + 0.04	11.9 + 0.4
- English Ovals	NF. HP.	8 Smm	1.1481	23mm	28.2 + 1.0	2.14 + 0.11	14.5 + 0.6
Eve 100's	F, SP.	100 ատ	1.0201	34.2 - 38.1mm	14.9 + 0.5	1.16 + 0.03	14.4 + 0.4
Eve 100's	F. M. SP.	100mm	1.0457	,	14.8 ± 0.4	1.17 ± 0.02	14.5 + 0.4
Eve Lights 120's	F. HP.	120mm	0.9942	36.6 - 38.8mm	14.0 + 0.6	1.14 + 0.03	12.6 + 0.9
Eve Lights 120's	F. M. HP.	120mm	1.0005	36.8'- 38.9mm	13.7 ± 0.5	1.11 + 0.03	12.3 + 0.5
Galaxy	F. SP.	85mm	1.0681	32.4 - 33.2mm	14.2 + 0.5	0.95 ± 0.02	13.4 + 1.3
Golden Lights	r. sp.	85mm	0.8998	33.2 - 35.7mm	7.3 ± 0.3	0.71 ± 0.03	8.1 7 0.5
Golden Lights	F. N. SP.	85mm	0.8827	33.7 - 35.8mm	7.7 + 0.4	0.71 + 0.03	8.0 + 0.5
Colden Lights 100's	F. SP.	100mm	1.0318	36.5 - 38.8mm	8.4 + 0.5	0.81 + 0.04	8.9 ± 0.6
Golden Lights 100's	F. M. SP	100mm	1.0405	36.2 - 39.1mm	. 7.1 + 0.5	0.71 + 0.04	6.9 ± 0.6
Half & Half	F, SP.	85mm	1.1174	26.1 - 28,4mm	16.2 + 0.6	1.33 + 0.05	14.6 + 0.5
Herbert Tareyton	NF. SP.	85mm	1.1430	2.3mm	27.2 ± 0.7	1.75 + 0.04	19.4 ± 0.6
Hi-Lite 100's	F. 11P.	100mm	1,1103	33.6 - 34.7mm	12.3 ± 0.4	0.89 7 0.02	13.1 + 0.5
iceberg 100's	F. M. SP.	100mm	0.9585	33.4 - 38.0mm	2.3 ± 0.3	0.26 + 0.02	3.6 ± 0.2
Kent	F. IIP.	80mm	0.8981	27.1 - 29.0mm	.12.4 \pm 0.5	0.97 ± 0.03	12.2 + 0.4
Kent	F. SP.	85mm	0.9302	26.1 - 29.6mm	12.5 + 0.5	1.00 + 0.03	12.6 + 0.5
Kent III	F. SP.	85mm	0.8401	33.6 - 36.0num	2,3 + 0.2	0.32 + 0.01	2.9 + 0.2
Kent 100's	F. SP.	100mm	1.0632	33.4 - 36.6mm	14.4 + 0.4	1.18 + 0.05	13.5 + 0.5
Kent 100's	F. M. SP.	100mm	1.0663	33.8 - 36.3mm	14.6 + 0.3	1.25 + 0.04	13.6 + 0.6
Kent III 100's	F. SP.	100mm	0.9903	37.1 - 38.6mm	4.4 + 0.3	0.50 + 0.02	6.6 + 0.3
Kool	Reg. NF. M. SP.		0.8869	23mm	19.2 + 0.5	1.13 + 0.05	14.4 + 0.3
Kool -	F. M. HP.	BOnum	0.9406	24.1 - 27.3mm	. 16.3 + 0.4	1,24 + 0.03	16.3 + 0.3
Kool '	F. M. SP.	0.5mm	0.9483	28.4 - 29.4mm	15.6 + 0.3	1.15 + 0.02	16.5 + 0.4
Kool Milds *	F. H. SP.	85mm	0.9311	32.4 - 33.2mm	11.0 + 0.2	0.87 + 0.02	12.3 + 0.4
Kool Super Lights	F. H. SP.	85mm	0.9282	31.2 - 33.9mm	$\frac{1}{6.1 + 0.3}$	0.53 + 0.02	6.9 + 0.3
Kool Super Longs 100's	F. H. SP.	100mm	1.0894	34,4 ~ 35,9mm	14.2 + 0.3	1.04 + 0.02	16.0 + 0.6
Kool Milds 100°s	F. M. SP.	100mm	1.1530	37.9 - 40.0mm	12.0 + 0.3	0.99 + 0.03	12.8 + 0.3
Kool Super Lights 100's	F. M. SP.	100mm	1.1438	37.5 - 40.3mm	9.5 + 0.5	0.72 + 0.02	12.1 ∓ 0.5
LAM	F. Hr.	80mm	0.8690	26.2 - 27.6mm	14.6 + 0.4	1.01 + 0.04	14.5 ∓ 0.3
L & M	F. SP.	85mm	0.8993	28.0 - 29.5mm	14.5 ± 0.5	1.00 ± 0.05	14.8 + 0.5
L & M Lights	F. SP.	8 Snan	0.8533	32.0 - 33.6mm	7.8 + 0.3	0.75 + 0.02	6.5 + 0.3
1. & M 100's	F. SP.	100mm	1.0405	34.3 - 38.4mm	14.8 ± 0.5	1.08 + 0.04	15.6 ± 0.7
L & M Lights 100's	F. SP.	100mm	0.9651	36.2 - 38.8mm	7.3 ± 0.3	0.74 ± 0.03	5.6 + 0.2
L & M Lights 100's	F. M. SP.	100mm	0.9544	36.6 - 38.4mm	7.4 + 0.3	0.77 + 0.04	5.7 ± 0.2
Lark	F. SP.	8 Smm	1.0083	26.4 - 28.3mm	14.4 + 0.5	1.10 7 0.03	14.0 + 0.5
Lark Lights	· F. SP.	85mm	0.8157	32.1 - 33.6mm	7.2 + 0.3	0.61 ± 0.01	7.4 + 0.2
Lark 100's	F. SP.	100mm	1.1471	32.0 - 34.0mm	15.8 + 0.5	1.21 ± 0.03	15.0 ± 0.5
tark Lights 100's	F. SP.	100mm	0.9723	37.4 - 38.5mm	7.0 + 0.5	0.61 ± 0.02	7.1 ± 0.4
Long Johns 120's	F. SP.	120mm	1.2306	37.0 - 39.0mm	17.6 + 0.8	1.40 + 0.06	18.5 + 0.8
Long Johns 120's	F. M. SP.	120mm	1.1790	36.4 - 39.1mm	15.5 + 0.8	1.34 + 0.06	16.7 + 1.0
facky Strike	Reg. NF. SP.	70mm	0.9324	2 3mm	24.0 ± 0.6	1.46 + 0.04	17.0 ± 0.7
laicky Ten	F. SP.	8 Smat	0.9907	31.2 - 34,4mm	7.6 + 0.4	0.63 7 0.03	9.3 ± 0.5
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¹ TPM dry (tar) - milligrams total particulate matter less nicotine and water.

² Milligrams total alkaloids reported as alcotine.

³ Faflitor; NF-non-filter; M-monthol; NP-hard pack; SP-soft pack; mm-millimeter.

⁴ Average weight reported in grams.

⁵ Range used in butt length because of variance of overwrap.

^{*} Tolurance shown is twice the standard deviation.

^{**} Below the sensitivity of the method.

⁶ See statement in text concerning Barclay.

TAR(1), NICOTINE(2) AND CARBON MONOXIDE OF TWO-HUNDRED (200) DOMESTIC CICARETTES

BRAND	TYPE	(3)	AVERAGE WEIGHT(4)	BUTT LENGTH(5)	TPM DRY(1)*	NICOTINE*	CARBON HONOXIDE
Lucky 100's	F. SP.	100mg	0.9533	33.5 - 35.7mm	3.0 ± 0.1	0.33 ± 0.04	4.5 + 0.3
Mariburo	F. HP.	80mm	0.9345	25.0 - 26.2mm	$^{''}$ 16.0 \pm 0.5	1.04 + 0.02	14.5 + 0.5
· Marlboro	F. M. HP.	80mm	0.9171	25.4 - 26.0mm	14.5 F 0.5	0.90 ± 0.03	13.7 + 0.4
Marlhoro	F. SP.	& Stara	0.9894	26.6 - 28.7mm	16.5 ± 0.5	1.05 + 0.03	15.2 ± 0.5
Marlboro	F. M. SP.	85mm	0.9789	28.0 - 29.2mm	13.7 + 0.4	0.87 + 0.02	13.5 + 0.4
Marlboro Lights	F. RP.	85mm	0.9738	32.5 - 35.0mm	10.3 ± 0.3	0.73 + 0.03	11.9 + 0.4
Mariboro Lights	F. SP.	85mm	0.9912	32.9 - 34.9mm	10.7 ± 0.3	0.75 + 0.02	12.4 + 0.6
Marlboro 100's	F. HP.	100mm	1.1235	33.0 - 35.0mm	16.1 + 0.4	1.07 + 0.03	16.0 + 0.4
Marlboro 100's	F. SP.	100mm	1.1436	33.8 - 35.4mm	16.3 + 0.5	1.08 + 0.03	16.2 + 0.5
Harlboro Lights 100's	F. SP.	100mm	1.1368	38.4 - 39.5mm	10.2 + 0.4	0.74 + 0.02	12.4 + 0.5
Max 120's	F. SP.	120mm	1.0228	36.1 - 38.8mm	18.7 + 0.4	1.56 + 0.05	17.6 + 0.4
Наж 120 [†] в	F. M. SP.	120mm	1.0013	16.6 - 40.1mm	18.9 + 0.3	1.57 + 0.06	17.8 ± 0.3 17.8 ± 0.5
Herit	r. SP.	85mm	0.9822	34.4 - 36.1mm	7.0 ± 0.5	0.51 ± 0.02	
Merit	F. H. SP.	85mm	0.9841	33.6 - 36.0mm	6.9 + 0.3		10.4 ± 0.6
Merit Ultra Lights	F. SP.	85mm.	0.9197	34.5 - 35.7 ma	2.9 + 0.3	0.51 ± 0.01	9.7 ± 0.4
Merit Vitra Lights	F. M. SP.	85mm	0.9188	34.5 - 35.9mm	~~	0.32 ± 0.02	3.8 ± 0.1
Merit 100's	F. SP.	100mm	1.1230			0.29 + 0.01	3.6 ± 0.2
Merit 100's	F. M. SP.	100mm	1,1269	38.0 - 39.9mm	9.6 + 0.4	0.70 ± 0.03	12.2 ± 0.5
Montelair	F. H. SP.	85mm	0.9139	37.8 - 40.9mm	9.1 ± 0.4	0.68 + 0.02	11.5 ± 0.5
Hore 120's	r. n. sr. r. sp.			26.2 - 27.9mm	14.4 ± 0.4	1.00 ± 0.03	15.9 ± 0.4
Hore 120's	F. M. SP.	120nm	1.0423	33.2 - 42.7mm	18.1 ± 0.9	1.44 ± 0.06	20.4 ± 0.0
Multifilter	F. SP.	120mm	1.0510	36.1 - 42.4nm	18.4 ± 0.8	1.52 ± 0.05	19.7 ± 1.1
Multifitier		R 5mm	1.1542	32.4 - 33.8mm	12.0 ± 0.3	0.83 ± 0.02	11.3 ± 0.4
	F. M. SP.	85mm;	1.1343	31.9 - 33.6mm	11.6 ± 0.4	0.80 ± 0.02	10.7 ± 0.3
Newport	F. M. HP.	80am	0.8758	27.6 - 28.8mm	15.7 ± 0.5	1.22 ± 0.03	16.1 ± 0.4
Newport	F. M. SP.	85mm	0.9284	27.0 - 29.2mm	17.5 ± 0.4	1.34 ± 0.03	18.0 ± 0.7
Newport 1,ights	F. M. HP.	80mm	0.8458	32.0 - 34.1mm	8.2 ± 0.4	0.73 ± 0.03	9.8 ± 0.5
Newport Lights	F. M. SP.	85mm	0.8810	34.4 - 35.3 mm	8.2 ± 0.4	0.78 ± 0.03	9.6 ± 0.6
Newport 100's	F. M. SP.	100mm	1.0615	33.2 - 37.4mm	19.8 ± 0.4	1.57 ± 0.04	19.6 \pm 0.6
Now ·	F. UP.	80mm	0.7082	32.2 - 35.4mm	**	0.05 ± 0.01	, * *
Now	F. SP.	85mm	0.8301	32.0 - 33.6mm	1.7 ± 0.1	0.22 <u>+</u> 0.01	2.8 ± 0.2
Now	F, M. SP.	85mm.	0.8249	32.2 - 33.7mm	1.5 \pm 0.3	0.20 ± 0.01	2.5 ± 0.2
llow 100's	e. HP.	100mm	0.6888	36.5 — 38.ნოთ	**	**	★ ¥″
Now 100's	F. SP.	100mm	0.9686	36.6 - 38.Onum	1.1 ± 0.2	0.19 ± 0.02	1.2 ± 0.1
Now 100's	F. M. SP.	100mm	1.0041	36.2 - 39.0mm	1.2 + 0.2	0.21 + 0.02	1.3 + 0.2
Unsie	F. M. SP.	85mm	0.9081	27.0 - 28.5mm	14.9 ∓ 0.3	1.03 + 0.03	14.9 + 0.3
Old Gold Straight	NF. SP.	85mm	1.0076	2 3mm	26.4 + 0.7	1.79 7 0.04	17.1 ± 0.5
Old Gold Filters	F. SP.	8 Smm	0.9329	27.3 - 31.8mm	17.0 $\widetilde{\pm}$ 0.5	1.34 7 0.03	18.7 Ŧ 0.6
Old Gold Lights	r. Sr.	8 Smm	0.8941	33.4 - 37.7inm.	9.6 7 0.3	0.92 + 0.02	10.5 + 0.4
Old Gold Filter 100's	F. SP.	100mm	1.0605	33.1 - 37.1mm	19.7 + 0.5	1.55 7 0.04	20.3 + 0.6
Pall Mall	NF. SP.	85 mm	1.0857	2)mm	24.3 ± 0.4	1.52 ± 0.03	16.7 + 0.6
Pall Mall	f. SP.	85mm	1.0058	25.2 - 28.0mm	17.6 + 0.4	1.21 + 0.03	18.1 + 0.3
Pall Hall Extra Light	F. SP.	85mm	0.9934	31.1 - 35.0mm	6.0 ± 0.3	0.54 + 0.04	6.4 + 0.4
Pall Mall 100's	F, SP.	100 agu	1.1572	34.2 - 35.4mm	16.6 + 0.6	1.30 ± 0.05	17.2 + 0.8
Pall Mall Light 100's	F. SP.	100mm	1.1104	36.6 - 38.9mm	9.2 ± 0.4	0.83 ± 0.03	8.7 ± 0.4

t TPM dry (tar) - milligrams total particulate matter less micotine and water.

² Milligrams total alkaloids reported as nicotine.

¹ F-filtor; NF-non-filter; M-menthol; MP-hard pack; SP-soft pack; mm-millimeter.

⁴ Average weight reported in grams.

⁵ Range used in butt length because of variance of overwrap.

^{*} Tolerance shown is twice the standard deviation.

^{**} Below the sensitivity of the method.

⁶ See statement in text concerning Barclay.

TAR(1), NICOTINE(2) AND CARBON MONOXIDE OF TWO-HUNDRED (200) DOMESTIC CIGARETTES

BRAND	TYPE	(1)	AVERAGE WELGHT(4)	BUTT LENGTH(5)	TPM DRY(1)*	NICOTINE*	CARBON MONOXIDE
				24.0 25.0	10 5 1 0 3	1 05 1 0 03	12.0 + 0.4
Pall Mall Light 100's	F. H. SP.	100mm	1.0393	34.0 + 36.0mm	12.5 ± 0.3	1.05 + 0.03	10.3 + 0.3
Parliament Lighta	F. IIP.	80mm	0.9682	31.7 - 34.2mm	9.0 ± 0.3	0.64 ± 0.02	10.2 + 0.4
Parliament Lights	F. 5P.	B5mma ·	1.0072	31.8 - 33.8mm	8.9 + 0.4	0.64 + 0.02	
Parliament Lights 100's	F. SP.	100mm	1.2520	38.0 - 41.8mm	11.8 + 0.4	0.87 + 0.02	11.2 ± 0.4 12.3 ± 0.5
Philip Horris	Reg. NF. SP.	- 7 Omm	0.8992	2 3 mm	21.3 + 0.7	1.41 ± 0.04	15.2 ± 0.6
Philip Morris Commander	NF. SP.	85mm	1.0706	2 Janua 34.å – 35. Janua	26.6 ± 0.5 16.5 ± 0.4	1.72 ± 0.03 1.08 ± 0.02	15.7 + 0.4
Phillip Morris International 100's	F. HP.	100mm	1.1244			1.02 + 0.03	15.1 + 0.4
Phillip Morris International 100's	F. H. IIP.	1,00mm	1.1140	14.0 - 35.4mm	16.2 ± 0.4	1.38 + 0.05	15.0 ± 1.0
Plcayune	Reg. NF. SP.	70mm	0.8751	2 3mm	19.3 ± 0.8		14.1 + 0.4
Players	Reg. NF. HP.	7 Omen	1.0526	23mm	$\frac{24.1 \pm 0.4}{10.5}$	1.93 ± 0.05	
Rnleigh	NF. SP.	:1 85mm	1.0543	23mm	22.5 ± 0.5	1.33 ± 0.03	16.9 ± 0.6 17.2 ± 0.5
Raleigh	F. SP.	85mm	0.9814	27.6 - 30.0mm	15.4 ± 0.4	1.0t ± 0.03	
Raleigh Lights	F. SP.	8 Smm	0.9843	31.7 - 33.6mm	8.3 ± 0.3	0.72 ± 0.02	10.6 ± 0.4
Raleigh 100°s	F. SP.	100mm '	1.1471	33.2 - 35.6mm	15.6 ± 0.5	1.11 ± 0.04	16.7 ± 0.6
Raleigh Lights 100°s	F. SP.	100am	1.1813	17.6 - 39.7mm	9.4 ± 0.4	0.78 ± 0.04	12.7 ± 0.6
St. Moritz 100's	F. SP.	100mm	1.0602	35.3 - 37.6mm	13.5 ± 0.5	1.07 ± 0.04	13.4 ± 0.4
St. Moritz 100's	F. M. SP.	- 100am	1.0568	35.0 - 37.6mm	14.4 ± 0.4	1.11 ± 0.03	14.3 ± 0.4
Salem	F. M. SP.	85mm	0.9976	27.0 - 28.9mm	14.1 ± 0.5	1.06 ± 0.03	13.6 ± 0.4
Salem Lights	F. M. SP.	. 85mm	0.9672	32.4 ↔ 34.6mm	7.8 + 0.4	0.60 ± 0.04	9.6 ± 0.4
Salem Ultra -	F. M. SP.	85mm	0.9358	31.9 - 33.5mm	3.3 ± 0.3	0.38 ± 0.05	3.8 ± 0.3
Salem 100's	F. H. SP.	100nm	1.1663	33.4 - 35.6mm	14.6 ± 0.3	1.15 <u>+</u> 0.04	13.6 ± 0.4
Salem Lights 100's	F. M. SP.	100mm	1.1540	34.3 - 38.0mm	9.3 \pm 0.3	0.78 ± 0.03	11.2 ± 0.4
Salem Ultra 100's	F. M. SP.	1 00mm . '	1.1224	36.5 - 38.0mm	3.9 ± 0.2	0.41 ± 0.02	5.3 ± 0.2
Saratoga 120's	F. IIP.	1.20mm	1.1080	36.1 - 39.9mm	14.9 ± 0.5	1.03 ± 0.03	16.0 ± 0.6
Saratoga 120's	F. M. UP.	1.20mm	1.1163	37.4 - 39.0mm	14.8 + 0.5	1.03 ± 0.03	15.6 ± 0.6
Silva Thins 100's	F. SP.	100mm	0.9769	33.5 - 36.0mm	11.4 <u>+</u> 0.4	1,04 ± 0.03	9.3 ± 0.1
Silva Thins 100's	F. M. SP.	100mm	0.9879	14.1 ~ 35.6mm	11.1 ± 0.4	1.02 ± 0.04	9.2 ± 0.4
Spring 100's	F. M. SP.	100mm	1.1027	32.7 - 35.8mm	19.2 <u>+</u> 0.4	1.13 ± 0.03	17.6 ± 0.5
Tall 120's	F. SP.	. 120mm	1.2184	35.2 - 39.4mm	17.4 ± 0.6	1.41 ± 0.04	18.6 ± 0.8
Tall 120's	F. M. SP.	1.20mm	1,2130	36.2 - 39.5mm	16.4 ± 0.6	1.36 ± 0.04	17.1 ± 0.6
Tareyton	F. SP.	85nm -	1.0373	25.9 - 28.1mm	14.2 ± 0.5	0.99 ± 0.03	15.3 ± 0.5
Tareyton Lights	F. SP.	85mm	0.9202	32.0 - 37.5mm	4.8 + 0.4	0.43 <u>+</u> 0.02	5.3 ± 0.4
Tareyton Ultra Low Tar	F. H. SP.	85mm	0.8999	33.4 - 36.8mm	0.5 ± 0.2	0.13 ± 0.02	0.8 ± 0.1
Tareyton 100's	r. sp.	100mm	1.1827	33.5 - 36.0mm	14.2 ± 0.5	1.05 ± 0.03	16.2 ± 0.6
Threyton Long Lights 100's	F. SP.	100mm	1,1988	32.6 - 36.7mm	7.0 ± 0.4	0.63 ± 0.02	7.1 ± 0.3
Triumph	F. SP.	85mm	0.8404	34.6 - 35.8mm	2.7 ± 0.3	0.37 ± 0.01	3.0 ± 0.2
Trlumph	F. H. SP.	85mm	0.8470	33.7 - 35.9mm	2.2 ± 0.3	0.33 🗜 0.02	2.5 ± 0.2
Trlumph 100°s	F. SP.	100mm ·	0.9888	36.8 - 38.4mm	4.2 ± 0.2	0.50 ± 0.02	6.0 ± 0.3
Triumph 100's	F. M. SP.	100mm	1.0116	36.9 - 38.7mm	3.8 ± 0.3	0.49 ± 0.05	5.3 ± 0.3
True	F. SP.	85mm	0.8425	32.0 - 33.6mm	4.3 ± 0.3	0.43 ± 0.02	4.9 + 0.2
True	F. H. SP.	B 5 mm	0.8519	31.9 - 34.3mm	4.4 + 0.3	0.42 + 0.03	5.1 ± 0.3
True Ultra One	r. sp.	. 85mm	0.8565	34,2 - 35.1mm	0.7 ± 0.2	0.18 + 0.0L	1.1 ± 0.1
True 100's	F. SP.	100mm	1.0197	34.1 - 35.6mm	7.3 ± 0.3	0.64 + 0.02	B.7 ቸ 0.4
True 100's	F. H. SP.	100mm	Q. 9898	34.4 - 36.2mm	7.8 ± 0.4	0.63 ∓ 0.04	9.1 ± 0.4
11 HE 130 N	. 1 . 111	- 4 0 · · · · ·	7				****

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I TPM dry (tar) - milligrams total particulate matter less nicotine and water.
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Milligrams total alkaloids reported as nicotine.

F-filter: NF-non-filter: M-menthol; HP-hard pack; SP-soft pack; mm-millimeter.

Average weight reported in grows,

Range used in butt length because of variance of overwrap.

Tolerance shown is twice the standard deviation,

TAR(1), NICOTINE(2) AND CARBON MONOXIDE OF TWO-HUNDRED (200) DOMESTIC CIGARETTES

BRAND	Type(3)		AVERAGE WEICHT(4)	BUTT LENGTH(5)	TPH DRY(1)*	NICOTINE	CARBON MONOXIDE
Vantage	. F. SP.	85mm	1.0704	30.7 - 35.4mm	9.0 <u>+</u> 0.3	0.71 ± 0.02	12.5 + 0.3
Yantage	F. H. SP.	85mma .	1.1119	. 31.9 - 33.8mm	9.9 + 0.2	0.73 + 0.02	14.3 + 0.4
Vantage Ultra Lights	F. SP.	85mm ·	1.0063	30.4 - 33.9mm	6.3 + 0.2	0.54 + 0.02	9.0 + 0.3
Vantage 100's	F. SP. 1	DOuras	1.2653	33.4 - 37.0mm	8.3 + 0.5	0.68 ± 0.02	12.2 + 0.5
Vantage Ultra Lights 100's	F. SP 1	DOmm	1.2488	35.5 - 38.4mm	5.1 7 0.3	0.47 ± 0.02	7.9 + 0.5
Viceroy	F. SP.	9.5mmare .	0.9453	27.9 - 30.9mm	14.6 + 0.5	0.97 + 0.04	16.0 + 0.4
Viceroy Rich Lights	F. SP.	35 m/m	0.9956	32.0 - 34.5mm	7.9 7 0.4	0.69 ± 0.03	9.8 + 0.5
Viceroy Super Long 100's	F. SP. 19	Ottun	1.1316	33.4 ~ 35.6mm	14.8 + 0.5	1.09 ± 0.03	16.3 ± 0.7
Viceroy Rich Lights 100's	F. SP. 10	Omm)	1.1537	37.4 - 40.6mm	9.1 + 0.3	0.77 + 0.03	11.6 + 0.5
Virginia Slims 100°s	F. SP. 1	Onza	0.9584	33.8 - 36.0mm	15.1 ± 0.4	1.00 + 0.02	15.1 + 0.5
Virginia Slims 100's	F. H. SP. 16)Omn	0.9632	33.6 - 35.7mm	15.1 7 0.4	1.00 + 0.02	14.2 + 0.5
Virginia Silms Lighta 100's	F. HP. 11) Մատո -	0.9514	38.1 - 40.0mm	7.5 + 0.3	0.58 + 0.01	8.3 + 0.4
Virginia Slima Lights 100's	F. M. HP 10) Om to	0.9949	37.5 - 40.3 rsm	7.4 + 0.3	0.58 + 0.02	8.0 7 0.2
Winston	F. HP.	30mm	0.9508	24.8 - 26.4mm	16.1 + 0.4	1.11 + 0.03	15.0 + 0.5
Winston	F. SP. 8	3.5mm	0.9831	26.9 - 28.6mm	15.4 + 0.5	1.10 + 0.03	15.5 + 0.5
Winston Lights	F. SP. : {	35mm	0.9955	29.8 - 35.6mm	10.8 + 0.4	0.85 ± 0.03	11.0 + 0.4
Winston Ultra	F. SP.	35mm .	0.8272	32.2 - 35.9mm	3.6 + 0.2	0.41 + 0.03	4.9 + 0.4
Winston 100's	F. SP. 10	Omen	1.1427	33.1 - 35.6mm	13.7 + 0.3	1.02 + 0.03	14.7 + 0.4
Winston Lights 100's	F. SP. 10	Omm '	1.1289	36.2 - 37.6mm	11.6 + 0.4	0.89 ± 0.03	14.4 + 0.5
Winston Oltra 100's	F. SP. 10	Omra .	1.0698	36.8 - 37.8mm	4.7 + 0.5	0.46 + 0.03	7.1 + 0.7
Winston International 100's	F. HP. 10	Onnan .	1.0756	31.0 - 32.2mm	17.9 ± 0.5	1.41 ± 0.04	16.3 ± 0.6
Additional Cigarettes Smoked Sep	arately					•	
Carlton 100's	F. M. HP. 10	l Otova	0.9108	37.6 - 38.5mm	**	0.12 + 0.01	0.8 + 0.1
Carlton 120's		Onen	0.9624	37.0 - 38.6mm	6.2 + 0.3	0.12 ± 0.01 0.62 ± 0.02	5.9 + 0.1
Carlton 120's		Otma	1.0391	37.2 - 39.3mm	5.0 ± 0.3	0.62 ± 0.02 0.53 ± 0.02	4.9 ± 0.3

¹ TPM dry (tar) - milligrams total particulate matter less nicotine and water.

² Milligrams total alkalolds reproted as nicotine.

³ F-filter; Nf-non-filter; M-menthol; HP-hard pack; SP-soft pack; mm-millimeter.

⁴ Average weight reported in grams.

⁵ Range used in butt length because of variance of overwrap.

^{*} Tolerance shown is twice the standard deviation.

^{**} Below the sensitivity of the method.

⁶ See statement in text concerning Barciny.

Am . Birotine and Carbon Monordic Content of Two-Bundre's (201) Varieties of Domestic Cigarettes (shown in increasing order of tar values)

BRAKD	1711	1AP (mg/cig)	RICOTIRI (mg/cig)	CARBON MOROXIIA (mg/clr)
Renson & Rodges 2/	rec. size, filter, (hard pack)	<0.5	0.1	1
Cambridge 2/	king size, filter, (hard pack)	€0.5	<0.05	<0.5
Cambridge 2/	king size, (ilter	↑ < 0.5	0.1	1
$\frac{2}{2}$	king size, filter, (hard pack)	<0.5	<0.05	<0.5
Carlton $\frac{2}{3}$	king size, filter	<0.5	0.1	
(ar) ton <u>2</u> /	king size, filter, menthol	· <0.5	0.1	1
Carlton 100's 2/	10(mm, filter, (hard pack)	₹0.5	0.1	1
Carlton 100's <u>2</u> f	100mm, filter, menthol, (hard pack)	<0.5	0.1	1
Now 2/	king size, filter, (hard pack)	< 0.5	0.1	<0.5
Now 100's 2/	100mm, filter, (hard pack)	<0.5	<0.05	<0.5
Tarevion Ultra Low Tar	king size, filter, menthol	1'	0.1	1
harclay 3/	king size, filter; (hard pack)	1 1	0.1	1 ·
True Vitra One	king size, filter			1
Farclay 3/	king size, filter,	1	0.2 0.2	1 .
Now 100's	100mm, filter	1	0.2	1
Now 100's	100mm, filter, menthol	, ,	0.2	3
Now	king rize, filter, menthol		0.2	3
New 1 1001 3/	king size, filter	,	0.3	2
Barclay 100's 3/	100mm, filter	2	0.3	3
Triumph	king size, filter, menthol	2	0.3	์ จ
Kent 111	king size, filter	2	0.3	4
lceberg 100's	100mm, filter, menthol	i, 2	0.4	3
Triumph	king size, filter	3	0.3	ž
Merit Vira Lights	king size; filter 100mm, filter	3	0.3	
Cambridge 100's		. 3	0.3	Ĺ
Merit Pitra Lights Locky 100's	king size, filter, menthol 100mm, filter	, ,	0.3	ž
Carlion 100's	100mm, filter, menthol	4	0.3	Ž.
Salem Ultra	king size, filter; menthol	. 3	0.4	ž
Doral II	king size, filter	1	0.4	3
Carlton 100's	100mm, filter	7	0.4	6
Kinston Ultra	king size, filter	<u> </u>	0.4	5
Triumph 100's	100mm, filter, menthol	4	0.5	5
Doral II	king size, filter, menthol		0.4	3
Salem Ultra 100's	100mm, filter, menthol		0.4	5 -
Triumph 100's	100mm, filter	4	0.5	~ 6
True	king size, filter	. 4	0.4	5
lrue	king size, filter, menthol	. 4	0.4	5
Kent J17 100's	100mm, filter		0.5	7
Decade	king size, filter, menthol	5	U.4	' 4
Decade	king size, filter	5	0.4	4
Winston Ultra 100's	100mm filter	5	0.5	7
Tarevion Lights	king size, filter	5	0.4 -	5
Carlton 120's	120mm, filter, menthol	5	0.5	5 .
	manning name was g missississes .	-	- • -	

¹ TIM dry (tar) - milligrams total particulate matter less nicotine and water.
2 All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as (0.5, (0.05, 0.5, respectively.)
3 See statement in text concerning Barclay.

Tar¹, Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes (shown in increasing order of tar values)

BRAND .	түре	TAR (mg/c1g)	NICOTINE (mg/c1g)	CARBON MONOXIDE (mg/cig)
Vantage Ultra Lights 100's	100mm, filter	5	0.5	8
Pali Mall Extra Light	king size, filter	6	0.5	6
Kool Super Lights	king size, filter, menthol	. 6	0.5	7
Carlton 120's	120mm, filter	6	0.6	6
Vantage Ultra Lights	king size, filter	. 6	0.5	9
Camel Lights	king size, filter, (hard pack)	6	0.6	7
Merit	king size, filter, menthol	7	0.5	ĺO
Tareyton Long Lights 100's	100mm, filter	7	0.6 -	. 7
Merit	king size, filter	. ,	0.5	10
Lark Lights 100's	100mm, filter	7	0.6	7
Golden Lights 100's	100mm, filter, menthol	7	0.7	7
Lark Lights	king size, filter	7	0.6	7
L & M Lights 100's	100mm, filter	7	0.7	6
True 100's	100mm, filter	ż	0.6	9
Golden Lights	king size, filter	7	0.7	8
Virginia Siims Lights 100's	100mm, filter, menthol, (hard pack)	7	0.6	Š
Arctic Lights 100's	100mm, filter, menthol	· '1	0.6	9
L & M Lights 100's	100mm, filter, menthol	7	0.8	6
· · · · · · · · · · · · · · · · · · ·	100mm, filter, (hard pack)	7	0.6	8
Virginia Silma Lights 100's		r R	0.7	8
American Lights 120's	120mm, filter, menthol	8	0.6	9
Arctic Lights	king size, filter, menthol	8	0.6	ģ.
Lucky Ten .	king size, filter	8	0.7	. .
Golden Lights	king size, filter, menthol	. 8	0.7	10
Camel Lights	king size, filter	8	0.7	9
American Lights 120's	120mm, filter	8	0.7	7
I. & M Lights	king size, filter	, 0	0.6	10
Salem Lights	king size, filter, menthol	8	0.6	9
True 100's	100mm, filter, menthol	8	0.7	10
Viceroy Rich Lights	king size, filter	9	0.7	9
Belair	king size, filter, menthol	8	0.7	10
Newport Lights	king size, filter, menthol, (hard pack)	S St	0.8	10
Newport Lights	king size, filter, menthol	8	0.7	10
Vantage 100's	100mm, filter	. B	0.8	7 .
Decade 100's	100mmu, filter	8	0.7	11
Raleigh Lights	king size, filter	8		9
Golden Lights 100's	100mm, filter	8 . B	8.0	10
helair 100's	100mm, filter, menthol	-	0.6	10
Parliament Lights	king size, filter	9	0.6	10
Parllament Lights	king size, filter, (hard pack)	9	0.6	
Vantage	king size, fliter	9	. 0.7	13
Herit 100's	100mm, filter, menthol	9	0.7	. 11
Vicerny Rich Lights 100's	100mm, filter	9	8.0	12
Pall Mall Light 100's	100mm, filter	9	0.8	9
Salem Lights 100's	100mm, filter, menthol	9	0.8	11

¹ TIM dry (tar) - milligrams total particulate matter less nicotine and water.
2 All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as 0.5, 0.05 \$\infty\$.5, respectively.
3 See statement in text concerning Barclay.

Tar¹, Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes (shown in increasing order of tar values)

BRAND	TYPE	TAR (mg/cig)	NICOTINE (mg/cig)	CARBON HONOXIDE (mg/c1g)
Raleigh Lights 100's	100mm, filter	9	0.8	13
Kool Super Lights 100's	100mm, filter, menthol	9 .	0.7	12
Old Gold Lights	king size, filter	10	0.9	10
Merit 100's	100mm, filter	10	0.7	12
Benson & Hedges Lights 100's	100mm, filter, menthol, (hard pack)	· 10	0.7	11 .
Vantage	king size, filter, menthol	. 10 .	0.7	14
Benson & Hedges Lights 100's	100hma, filter, menthol	10	0.7	12
Marlboro Lights 100's	100mm, filter	10	0.7	12
Hariboro Lights	king size, filter, (hard pack)	10	0.7	12
Benson & Hedges Lights 100's	100mm, filter	10	0.7	13
Benson & Hedges Lights 100's	100mm, filter, (hard pack)	11	0.7	11
**	king size, filter	11	0.7	12
Mariboro Lights	king size, filter	11	0.9	11
Winston Lights	king size, filter, menthol	îî	0.9	12
Kool Milds	100mm, filter, menthol	11	1.0	9
Silva Thins 100's Silva Thins 100's	100mm, filter	îì	1.0	ý
• • • • • • • • • • • • • • • • • • •		12	0.9	15
Camel Lights 100's	100mm, filter king size, filter, menthol	12	0.8	ii
Multifilter Winston Lights 100's		12	0.9	14
	100mm, filter	12	0.9	ii
Parilament Lights 100's	100mm, filter	12	ĭ.ó	13
Root Milds 100's	100mm, filter, menthol	12	0.8	11
Mairifilter	king size, filter	12	0.9	13
HI-Lite 100's	100mm, filter, (hard pack)	. 12	1.0	12
Kent	king size, filter, (hard pack)	12	1.1	12
Pall Mail Light 100's	100mm, filter, menthol	13	1.0	13
Kent	king size, filter .	14	1.1	13
St. Moritz 100's	100mm, filter	14	1.0	14
Winston 100's	100mm, filter	14	0.9	14
Mariboro	king size, filter, menthol	14	1.1	12
Eve Lights 120's	120mm, filter, menthol, (hard pack)	14	0.9	1)
Alpine	king size, filter, menthol	= :	1.1	13 .
Eve Lights 120's	120mm, filter, (hard pack)	14 14	1.1	14
Salem	king size, filter, menthol	14	1.0	15
Tareyton	king size, filter	= :	1.1	16
Tareyton 1001s	100mm, filter	14	1.0	
Kool Super Longs 100's	100mm, Eilter, menthol	14	1.0 59	16
Galaxy	king size, filter	. 14	1.0	13
Kent 100's	100mm, filter	14	1.2	13
Montelair	king size, filter, menthol	14	1.0	16
St. Horitz 100's	100mm, fifter, menthol	14	1.1	14
Lark	king size, filter	14	1.1	. 14
1, 6 M	king size, filter	14	1.0	15 14
. Marlboro	king size, fliter, menthol, (hard pack)	15	0.9	14
Viceroy	king size, filter	15	1.0	16

¹ TPM dry (tar) - milligrams total particulate matter less nicotine and water.
2 All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as 0.5,0.05 \$\omega\$.5,0.05 \$\omega\$.5, respectively.
3 See statement in text concerning Barclay.

Tar¹, Micotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes (shown in increasing order of tar values)

Salem 100's	BRAND	ТҮРЕ	TAR (mg/cig)	NICOTINE (mg/cig)	CARBON MONOXIDE (mg/clg)
Kent 100's 1.5 M 1.5 M 1.5 M 1.6 King size, filter, (hard pack) 1.5 1.0 1.6 L.5 M 1.6 Chastorfield 1.7 King size, filter, (hard pack) 1.8 L.0 1.9 L.1 1.0	Salem 100's	100mm, filter, menthol	15	1.1	14
La M Chastorfield king size, filter, (hard pack) 15 1.0 14 Vicercy Super Longs 100's 100mm, filter			15	1.2	14
Chestartfeld			15	1.0	14
Viceroy Super Longs 100's 100'ms, filter 15 1.1 16			15	1.0	15
Saratoga 120's 120mm, filter, menthol, (hard pack) 15 1.0 16			' 15	1.1	16
Eve 100's			15	1.0	16
L A H 100's			. 15	1.2	14
Renson & Hedges king size, filter, (hard pack) 15 1.2 12 12 12 13 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 16 1.0 15 1.0 16 1.0 15 1.0 16 1.0 15 1.0 16 1.0 15 1.0 16 1.0 15 1.0 16 1.0 15 1.0 16 1.0 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 15 1.0 16 1.0 17 1.0 1.0 17 1.0 1.0 17 1.0			1.5 .	1.1	16
Uasts		· · · · · · · · · · · · · · · · · · ·	: 15	1.2	12
Eve 100's 100mm, filter 15 1.2 14 Saratogn 120's 102mm, filter, (hard pack) 15 1.0 16 Virginia 31ims 100's 100mm, filter, menthol 15 1.0 15 Virginia 31ims 100's 100mm, filter, menthol 15 1.0 14 Chesterfield 101 101mm, filter 15 1.1 16 Dufumrier king size, filter 15 1.0 17 Raicigh king size, filter 15 1.0 17 Winston king size, filter 15 1.1 16 Long Johns 120's 120mm, filter 16 1.3 17 Raicigh 100's 100mm, filter 16 1.1 17 Knol king size, filter, menthol 16 1.1 17 Roal king size, filter, menthol 16 1.2 15 Remson 6 Hedges 100's 100mm, filter, menthol (hard pack) 16 1.2 15 Remson 6 Hedges 100's 100mm, filter 16 1.2 15 Ranson 6 Hedges 100's 100mm, filter 16 1.1 17 Romel king size, filter 16 1.1 16 Rarlboro 100's 100mm, filter, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter 16 1.1 16 Rarlboro 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Rarlboro 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Rarlbor			15	1.0	15
Saratogn 120's 102mm, filter, (hard pack) 15 1.0 16 Virginia Stims 100's 100mm, filter 15 1.0 15 Virginia Stims 100's 100mm, filter 15 1.0 14 Chesterfield 101 101mm, filter 15 1.1 16 Dublaurler king size, filter 15 1.0 17 Roleigh king size, filter 15 1.0 17 Winston king size, filter 15 1.0 17 Winston king size, filter 15 1.1 16 Long Jolins 120's 120mm, filter 15 1.1 16 Long Jolins 120's 120mm, filter, menthol 16 1.3 17 Raleigh 100's 100mm, filter, menthol 16 1.1 17 Ranson & Hedges 100's 100mm, filter, menthol 16 1.1 17 Menson & Hedges 100's 100mm, filter, menthol 16 1.0 15 Nowport king size, filter, menthol 16 1.2 16 Lark 100's 100mm, filter 16 1.2 15 Benson & Hedges 100's 100mm, filter, menthol 16 1.2 15 Marlboro king size, filter, hard pack 16 1.2 16 Marlboro king size, filter, (hard pack 16 1.0 14 Minston king size, filter, (hard pack 16 1.1 16 Winston king size, filter, (hard pack 16 1.1 16 Winston king size, filter, (hard pack 16 1.1 16 Winston king size, filter, (hard pack 16 1.1 16 Winston king size, filter, (hard pack 16 1.1 16 Winston king size, filter, (hard pack 16 1.1 16 Winston king size, filter, menthol, (hard pack 16 1.1 16 Winston king size, filter 16 1.3 15 Marlboro 100's 100mm, filter, menthol, (hard pack 16 1.1 16 Knol King size, filter, menthol, (hard pack 16 1.1 16 Winston King size, filter 17 1.3 17 Winston King size, filter 17 1.3 18 Winston King size, filter 17 1.3 18 Winston King size, filter 17 1.3 18 Winston King si			15	1.2	14
Virginia Slims 100's 100mm, filter 15 1.0 15 Virginia Slims 100's 100mm, filter, menthol 15 1.0 14 Chesterfeld 101 101mm, filter 15 1.1 16 Dublaurier king size, filter 15 1.0 17 Roleigh king size, filter 15 1.0 17 Winston king size, filter 15 1.1 16 Long Johns 120's 120mm, filter 16 1.3 17 Raleigh 100's 100mm, filter 16 1.1 17 Kool king size, filter, menthol 16 1.1 17 Newport king size, filter, menthol 16 1.1 17 Lark 100's 100mm, filter, menthol 16 1.2 15 Lark 100's 100mm, filter 16 1.2 15 Lark 100's 100mm, filter 16 1.2 15 Benson & Hedges 100's 100mm, filter 16 1.2 15 Maribore king size, filter, menthol 16 1.1 17 Ranson & Nedges 100's 100mm, filter 16 1.2 16 Maribore king size, filter 16 1.2 16 Maribore king size, filter 16 1.2 16 Maribor 100's 100mm, filter, (hard pack) 16 1.0 14 Renson & Nedges 100's 100mm, filter, (hard pack) 16 1.1 15 Maribor 100's 100mm, filter, (hard pack) 16 1.1 15 Maribor 100's 100mm, filter, (hard pack) 16 1.1 15 Maribor 100's 100mm, filter, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Maribor 100's 100mm, filter, menthol, (hard pack) 16 1.1 16			15	1.0	16
Virginia 311ms 100's	· .	· · · · · · · · · · · · · · · · · · ·	15	1.0	1.5
Chesterfield 101	· ·	•	15 .	1.0	14
Duffurfer Ridigh Ring size, filter, (hard pack) 15 1.0 17 Ridigh Ring size, filter 15 1.0 17 Ridigh Ring size, filter 15 1.1 16 1.3 17 1.4 16 1.3 17 1.5 1.0 17 1.3 17 1.5 1.0 17 1.3 17 1.0 17 1.3 17 1.5 1.0 17 1.3 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0 17 1.5 1.0	•		15	1.1	16
Rateleth King size, filter 15 1.0 17					17
Winston king size, filter 15 1.1 16					17
Long Johns 120's 120mm, filter, menthol 16					
Raleigh 100's king size, filter, menthol 16 1.1 17 Rool king size, filter, menthol 16 1.0 15 Newport king size, filter, menthol, (hard pack) 16 1.2 16 Lark 100's 100mm, filter 16 1.2 15 Benson & Hedges 100's 100mm, filter 16 1.2 15 Benson & Hedges 100's 100mm, filter 16 1.2 15 Renson & Hedges 100's 100mm, filter 16 1.2 16 Marlboro king size, filter 16 1.2 16 Marlboro king size, filter, (hard pack) 16 1.0 14 Nenson & Hedges 100's 100mm, filter, (hard pack) 16 1.1 16 Marlboro 100's 100mm, filter, (hard pack) 16 1.1 16 Marlboro 100's 100mm, filter, (hard pack) 16 1.1 16 Philip Morris International 100's 100mm, filter, menthol, (hard pack) 16 1.3 15 Marlboro 100's 100mm, filter 16 1.3 15 Knol King size, filter 16 1.3 15 Knol King size, filter, menthol, (hard pack) 16 1.1 16 Philip Morris International 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Philip Morris International 100's 100mm, filter, menthol, (hard pack) 16 1.1 16 Philip Morris International 100's 100mm, filter, menthol 16 1.4 17 Old Gold Filters king size, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 17 Newport king size, filter, menthol 17 1.3 18 Pall Mall king size, filter, menthol 17 1.3 18 Fall Mall king size, filter, menthol 17 1.3 18			= = =		•
Kool King size, filter, menthol 16					
		_			
Newport king size, filter, menthol, (hard pack) 16 1.2 15					
Lark 100's 100mm, filter 16 1.2 15					
Benson & Hedges 100's 100mm, filter, menthol 16 1.1 17 Camel king size, filter 16 1.2 16 Marlboro king size, filter, (hard pack) 16 1.0 14 Denson & Hedges 100's 100mm, filter, (hard pack) 16 1.1 16 Winston king size, filter, (hard pack) 16 1.1 15 Marlboro 100's 100mm, filter, (hard pack) 16 1.1 16 Philip Morris international 100's 100mm, filter, menthol, (hard pack) 16 1.0 15 Half & Half kialf king size, filter 16 1.3 15 Marlboro 100's king size, filter 16 1.3 15 Marlboro 100's king size, filter, menthol, (hard pack) 16 1.1 16 Knol king size, filter, menthol, (hard pack) 16 1.2 16 Tail 120's 120mm, filter, menthol 16 1.4 17 Benson & Hedges 100's 100mm, filter, menthol 16 1.1 16 Philip Morris International 100's 100mm, filter, (hard pack) 16 1.1 16 Warlboro king size, filter 16 1.1 16 Pall Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 19 Tail 120's 120mm, filter 17 1.3 19 Tail 120's king size, filter, menthol 17 1.3 18 Newport king size, filter, menthol 17 1.3 18 Pall Hall king size, filter, menthol 17 1.3 18	•				
Camel king size, filter 16 1.2 16 Marlboro king size, filter 16 1.0 14 Denson & Hedges 100's 100mm, filter, (hard pack) 16 1.1 16 Winston king size, filter, (hard pack) 16 1.1 15 Marlboro 100's 100mm, filter, (hard pack) 16 1.1 16 Philip Morris International 100's 100mm, filter, menthol, (hard pack) 16 1.0 15 Harlboro 100's king size, filter 16 1.3 15 Marlboro 100's 100mm, filter 16 1.1 16 Tail 120's 120mm, filter, menthol, (hard pack) 16 1.2 16 Tail 120's 120mm, filter, menthol 16 1.4 17 Benson & Hedges 100's 100mm, filter, menthol 16 1.1 16 Philip Morris International 100's 100mm, filter 16 1.1 16 Harlboro king size, filter 16 1.1 16 Path Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 17 Tail 120's king size, filter 17 1.1 19 Tail 120's king size, filter 17 1.4 19 Tail 120's king size, filter 17 1.3 18 Pail Hall king size, filter 18 1.2 18					
Marlboro king size, filter, (hard pack) 16 1.0 14 Denson & Hedges 100's 100mm, filter, (hard pack) 16 1.1 16 Winston king size, filter, (hard pack) 16 1.1 15 Marlboro 100's 100mm, filter, (hard pack) 16 1.1 16 Philip Morris International 100's 100mm, filter, menthol, (hard pack) 16 1.0 15 Marlboro 100's king size, filter 16 1.3 15 Marlboro 100's king size, filter 16 1.1 16 Knol king size, filter, menthol, (hard pack) 16 1.2 16 Tail 120's 100mm, filter, menthol 16 1.4 17 Benson & Hedges 100's 100mm, filter, menthol 16 1.4 17 Benson & Hedges 100's 100mm, filter, (hard pack) 16 1.1 16 Marlboro king size, filter 16 1.1 16 Marlboro king size, filter 16 1.1 16 Marlboro king size, filter 16 1.0 15 Path Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 19 Tail 120's king size, filter 17 1.3 19 Tail 120's king size, filter 17 1.4 19 Newport king size, filter, menthol 17 1.3 18 Pall Hall king size, filter, menthol 17 1.3 18	_	*			
Renson & Hedges 100's 100mm, filter, (hard pack) 16					
Winston					
Marlhoro 100's Marlhoro 100's Marlhoro 100's Marlhoro 100's Malf & Malf Marlhoro 100's Marlhoro Malf Marlhoro 100's Marlhor			•		
Philip Morris International 100's 100mm, filter, menthol, (hard pack) 16 1.3 15 Half & Half					
Martboro 100's 100mm, filter 16 1.1 16 Knol			= =		
Kool king size, filter, menthol, (hard pack) 16 1.2 16 Tall 120's 120mm, filter, menthol 16 1.4 17 Benson & Hedges 100's 100mm, filter 16 1.1 16 Philip Morris International 100's 100mm, filter, (hard pack) 16 1.1 16 Marthoro king size, filter 16 1.0 15 Path Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 19 Tail 120's 120mm, filter 17 1.4 19 Newport king size, filter, menthol 17 1.3 18 Path Hall king size, filter 18 1.2 18	_	* '	·		
Tail 120's 120mm, filter, menthal 16 1.4 17 Benson & Hedges 100's 100mm, filter 16 1.1 16 Philip Morris International 100's 100mm, filter, (hard pack) 16 1.1 16 Marthoro king size, filter 16 1.0 15 Pall Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 19 Tail 120's 120mm, filter 17 1.4 19 Newport king size, filter, menthal 17 1.3 18 Pall Hall king size, filter 18 1.2 18				-	
Benson & Hedges 100's 100mm, filter 16 1.1 16 Philip Morris International 100's 100mm, filter, (hard pack) 16 1.1 16 Marthoro king size, filter 16 1.0 15 Pall Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 19 Tail 120's 120mm, filter 17 1.4 19 Newport king size, filter, menthol 17 1.3 18 Pall Hall king size, filter 18 1.2 18					
Philip Morris International 100's 100mm, filter, (hard pack) 16 1.1 16 Marthoro king size, filter 16 1.0 15 Palt Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 19 Tail 120's 120mm, filter 17 1.4 19 Newport king size, filter, menthol 17 1.3 18 Pall Hall king size, filter 18 1.2 18					
Marthoro king size, filter 16 1.0 15 Patt Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 19 Tail 120's 120mm, filter 17 1.4 19 Newport king size, filter, menthol 17 1.3 18 Pall Hall king size, filter 18 1.2 18					
Palt Mall 100's 100mm, filter 17 1.3 17 Old Gold Filters king size, filter 17 1.3 19 Tail 120's 120mm, filter 17 1.4 19 Newport king size, filter, menthol 17 1.3 18 Pall Hall king size, filter 18 1.2 18	Philip Morris International 100's	100mm, filter, (hard pack)			
Old Gold Filters king size, filter 17 1.3 19 Tail 120's 120mm, filter 17 1.4 19 Newport king size, filter, menthol 17 1.3 18 Pail Hall king size, filter 18 1.2 18	Marthoro				
Tail 120's 120mm, filter 17 1.4 19 Newport king size, filter, menthol 17 1.3 18 Pall Hall king size, filter 18 1.2 18	Palt Mall 100's	· · · · · · · · · · · · · · · · · · ·			
Newport klng size, filter, menthol 17 1.3 18 Pall Hall king size, filter 18 1.2 18	Old Gold Filters				
Pall Hall king size, filter 18 1.2 18	Tali 120's				
rais nati	Newport	king size, filter, menthol		_	
Long Johns 120's 120sm, filter 18 L.4 18		· · · · · · · · · · · · · · · · · · ·			
	Long Johns 120's	120mm, filter	18	1.4	18

¹ TIM dry (tar) - milligrams total particulate matter less nicotine and water.

² All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as 0.5, 0.05,0.5, respectively.
3 See statement in text concerning Barclay.

Tar¹, Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes (shown in increasing order of tar values)

BRAND	TYPE	TAR (mg/cig)	NICOTINE (mg/cig)	CARBON MONOXEDI (mg/cig)
рилир				
Winston International 100's	100mm, filter	- 10	1.4	16
Hore 120's	120mm, filter	18	1.4	20
More 120's	120mm, filter, menthol	18	1.5	20
Hax 120's	120mm, filter	19	1.6	18
Max 120's	120mm, filter, menthol	. 13	1.6	18
Spring 100's	100mm, filter, menthol	19	1.1	18
Kool	reg. size, non-filter, menthol	19	1.1	14
Pleayune	reg. size, non-filter	19	1.4	15
Old Gold Filters	100mm, filter	20	1.5	20 -
Newport 100's	100mm, filter, menthol	- 20	1.6	20
Camel	reg. size, non-filter	21	1.4	13
Chesterfield	reg. size, non-filter	21	1.3	, 13
Philip Morris	reg. size, non-filter	21	1.4	12
Raleigh	king size, non-filter	22	1.3	17 .
English Ovals	reg. size, non-filter, (hard pack)	23	1.7	. 12
Lucky Strike	reg. size, non-filter	. 24	1.5	17
	reg. size, non-filter, (hard pack)	24	1.9	14
Players Pall Mall	king size, non-filter	24	1.5	17
Chesterfield	king size, non-filter	25	1.7	16
Old Gold Straight	king size, non-filter	26	1.8	17
•	king size, non-filter	27	. 1.7	15
Phillip Morris Commander	king size, non-filter	27	1.7	19
Herbert Tareyton	king size, non-filter, (hard pack)	28	2.1	15
Euglish Ovals Bull Durham	king size, filter	29	1.9	24

¹ TTM dry (tar) - milligrams total particulate matter less nicotine and water.
2 All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as(0.5,\(0.05\(0.05\(0.5)\), 5. respectively.
3 See statement in text concerning Barclay.

Tar 1. Mictime and Carbon Monoxide Content of Two-Hondred (200) Varietles of Homestic Ciparettes (shown in increasing order of nicotine values)

	,	-		
BRAND	to the	TAR	10001174	CARBON MONOXIDI
Die 34h	TYPE '.	(me/cip) .	(տբ/(iբ)	(glo\gm)
Cambridge 3/	kine size, filter, (bard pack)	<0.5 €	€9.05	***
Carlion 3/	kine size, filter, (hard pack)	€0.5	_	<0.5
Nov 100's 3/	100mm, filter, (hard pack)		< 0.05	<0.5
Nov 3/	king size, filter, (hard pack)	< 0.5	< 0.05	<0.5
Carlton 3/	king Size, filter, menthol	<0.5	0.1	<.0.5
Carlton 100's 3/	100mm, filter, (hard pack)	<0.5	ft. 1	1
Benson & Hedges 3/		<0.5	0.1	1
Carlton 3/	reg. size, filter, (hard pack)	∠ 0.5	0.1	1
Cambridge 3/	king size, filter.	<0.5	0.1	. 1
Carlton 100's 3/	king size, filter	₹9.5	0.1	3
	100mm, filter, menthol, (hard pack)	<0.5	0.1	1
Tarevion l'Itra Low Tar Barclay 4	kiup size, filter, menthol	1	0.1	3
Barclay 4	king size, filter, (hard pack)	1 .	0.1	1
	king size, filter	1.	0.2	1
True Ultra One	hing size, filter	. 1	0.2	1
Now 100's	100mm, filter	1	0.2	1
Now	king size, filter, menthol	· 2 ·	0.2	3
Now 100's	100mm, filter, menthol	1	0.2	1 5
Now 4/	king size, filter · .	2	0.2	3
Barclay 100's 4/	100mm, filter	2	0.3	2
lceberg 100's	100mm, filter, menthol	2 "	0.3	ž ·
Herit Ultra Lights	king size, filter, menthol	3	0.3	À
Cambridge 100's	100mm, filter	3 ' '	0.3	Š
Kent III	king size, filter	2	0.3	3
Merit Ultra Lights	king size, filter	1	0.3	ž
Lucky 100's	100mm, filter	้า	0.3	7
Triumph	king size, filter, menthol		0.3	3
Carlton 100's	100mm, filter, menthol	7	0.3	
Carlton 190's	100mm, filter		0.4	6
Trlumph	king size, filter	, ,	-	o .
Salem Ultra	king size, filter, menthol		0,4	3
Doral II	king size, filter	3	0.4	4
Salem Ultra 100's	100mm, filter, menthol	4	0.4	3
Winston Ultra.	king size, filter	4	0.4	5
Doral II		4	0.4	5
True	king size, filter, menthol	4	0.4	3
Tareyton Lights	king size, filter, menthol	4	0.4	5
True	king size, filter	5	0.4	5
	king size, filter	4	0.4	5 `
Decade	king size, filter, menthol	5 ,	0.4	4
Decade	king size, filter	5	0.4	4
Winston Wirra 100's	100mm, filter	\$	0.5	7
Vantage Ultra Lights 100's	100mm, filter	5	0.5	8 .
Triumph 100's	100mm, filter, menthol	4	0.5	5
Triumph 100's	100mm, filter	4	0.5	. 6
Kent III 100's	100mm, filter	4	0.5	7

¹ TPM dry (tar) - milligrams total particulate motter less nicotine and water.

² Milligrams total alkaloids reported as nicotine.
3 All scores below 0.5 mg. "Lnr." 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as <0.5. <0.05, <0.5, respectively.

⁴ See statement in text concerning Barclay.

 ${\rm Tar}^1$, Nicotine and Carbon Honoxide Content of Two-Hundred (200 Varieties of Domestic Cigarettes . (shown in increasing order of nicotine values)

BRAND -	Type	TAR (mg/clg)	NICOTINE (mg/cfg)	CARBON MONOXIDE (mg/clg)
Merit	king size, filter	7 .	0.5	10
Merit	king size, filter, menthol .	7	0.5	10
Kool Super Lights	king size, filter, menthol	6	0.5	7
Carlton 120's	120mm, Filter, menthol	5 '	0.5	5
Vantage Ultra Lights	king size, filter	6	0.5	9
Pall Mall Extra Light	king size, filter	. 6	0.5	6
Virginia Slims Lights 100's	100mm, filter, (hard pack)	, ,	0.6	- 8
Virginia Slims Lights 100's	100mm, filter, menthol, (hard pack)	7	0.6	8
	king size, filter, menthol	8	0.6	10
Salem Lights	100mm, filter	,	0.6	7
Lark Lights 100's	king size, (ilter	,	0.6	7
Lark Lights		, ·	0,6	6
Carlton 120's	120mm, filter	7	0.6	7
Tareyton Long Lights 100's	100ma, filter	A	0.6	9
True 100's	100mm, filter, menthol	٠ د	0.6	7 %
Comei Lights	king size, filter, (hard pack)		0.6	ģ
Lucky Ten	king size, filter	, ,	0.6	10
Parliament Lights	l ng size, filter	* .	. 0.6	9
True 100's	100mm, filter	, ,		10
Parliament Lights	king size, filter, (hard pack)	9	0.6	10
Belair 100's	100mm, filter, menthol	8	0.6	
Arctic Lights 100's	100mm, filter, menthol 1	/	0.6	9 '
Arctic Lip →	king size, filter, menthol	Ŕ	ذ. 0	9
American L its 120's	120mm, filter, menthol	8	0.7	8
Vantage 100's	1.Cham. filter	0	0.7	12
Merit 100's	100mm, filter, menthol	. 9	. 0.7	II.
Viceroy Rich Lights	king size, filter	q	0.7	10
Merit 100's	l (Cham, filter	10	0.7	12
American Tights 120's	120mm, filter	8	0.7	9
Camel Ligi	king size, filter	8	0.7	10
Golden Lights	king size, filter, menthol	8	0.7	8 ·
Vantage	king size, filter	9	0.7	13
Colden Lights	king size, filter	. 7	0.7	8 .
Colden Lights 100's	100mm, filter, menthol	7	. 0.7	.7
Benson & Hedges Lights 100's	100mm, filter, menthol, (hard pack).	10	0.7	11
Belair	king size, f liter, menthol	. 8	0.7	9
Kool Super Lights 100's	100mm, filter, menthol	9	. 0.7	12
Raleigh Lights	king size, filter	. 8	0.7	11
Harlboro Lights	king size, filter, (hard pack)	' , 10 .	0.7	12
Newport Lights	king size, filter, menthol, (hard pack)	. 8	0.7	10
Vantage	king size, filter, menthol	10	0.7	. 14
Benson & Nedges Lights 100's	100mm, filter, menthol	10	0.7	12
Benson & Hedges Lights 100's	100mm, filter, (hard pack)	11	0.7	11
Mariboro Lights 100's	100mm, filter	10	0.7	12
L & M Lights 100's	100pm, filter	7	0.7	6
IV OF IA TARRIED AVV D	Provided By and water	•	= =	

¹ TPM dry (tar) - milligrams total particulate matter less nicotine and water.
2 Milligrams total alkaloids reported as uicotine.
3 All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as <0.5, <0.05, <0.5, respectively.

Tar 1, Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes (shown in increasing order of nicotine values)

BRAND	түре	TAR (mg/cig)	'NICOTINE (mg/cig)	CARBON MONOXIDE (mg/clg)
Benson & Hedges Light 100's	100mm, filter	. 10	0.7	13
	king size, filter	B	0.7	7
L & H Lights	king size, filter	11	0.7	12
Mariboro Lights	100mm, filter	9	0.8	12
Viceroy Rich Lights 100's	100mm, filter, menthol	· 1	0.8	6
L & H Lights 100's	king size, filter, menthol	à	0.8	10
Mewport Lights	100mm, filter	9	0.8	13
Rajeigh Lights 100's Salem Lights 100's	100mm, filter, menthol	. 9	0.8	11
Multifilter	king size, filter, menthol	· 12	0.8	11
_	100mm, tilter	8	0.8	9
Golden Lights 100's	100mm, filter	8	8.0	7
Decade 100's	king size, filter	12	0.8	11 .
Multifilter	100rus, filter	9	0.8	9
Pall Mall Light 100's	king size, filter	· 11	0.9	11
Winston Lights	100mm, filter	12	0.9	15
Camel Lights 100's	king size, filter, menthol	14	0.9	14
Mariboro		12	0.9	11
Parlinment Lights 100's	100mm, filter	11.	0.9	12
Kool Milds	king size, filter, menthol	12	. 0.9	14
Winston Lights 100's	100mm, filter	. 14	0.9	13
Alpine	king size, filter, manthol	12	0.9	13
HI-Lite 100's	100mm, filter, (hard pack)	15	0.9	14
Harlboro	king size, filter, menthol, (hard pack)	10	0.9	10
Old Gold Lights	king size, filter	14	1.0	13
Galaxy	king size, filter	15	1.0	16
Viceroy	king size, filter	12	1.0	
Kent	king size, filter, (hard pack)	14	1.0	15
Tareyton	king size, filter	12		13
Kool Hilds 100's	100mm, filter, menthol .	15	1.0	14
Virginia Slims 100's	100mm, filter, menthol	14	1.0	16
Montelair	king size, filter, menthol	14	1.0	15
l, & M	king size, fliter	=	1.0	13
Kent	king size, filter	13	1.0	15
Virginia Slims 100's	100mm, filter	. 15		14
L&M	king size, filter, (hard pack)	15	1.0	17
Raieigh	king size, filter	15	1.0	15
Phillip Horris International 100's	100mm, filter, menthul (hard pack)	16	1.0	9 .
Silva Thins 100's	100mm, filter, menthol	11	1.0	14
Winston 100's	LOOmm, filter	14	1.0	
Saratoga 120's	120mm, filter, (hard	15	1.0	16
Saratoga 120's	(20mm, filter, menthol, (rd pack)	15	1.0	16
Onsts	king size, filter, menthol	15	1.0	15
Silva Thins 100's	100mm, filter	11	1.0	9
DuMaurier	king size, filter, (hard pack)	15	1.0	17
Mariboro	king size, filter, (hard pack)	16	1.0	14

¹ TPM dry (tir) - militgrams total particulate matter less nicotine and water.
2 Milligrams total alkaloids reported as nicotine.
3 All scores below 0.5 mg, "tar," 0.05 mg, nicotine and 0.5 mg, carbon monoxide reported as <0.5, <0.05, <0.5, respectively.

Tar¹, Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes : (shown in increasing order of nicotine values)

	BRAND	ТҮРЕ	TAR (mg/clg)	MICOTINE (mg/cig)	CARBON MONOXIDE (mg/clg)
1	Kool Super Longs 100's	100mm, filter, menthol	14	. 1.0	16
4	Chesterfield	king size, filter	. 15	1.0	15
	Marlboro	king size, filter	16	1.0	15
	Benson & Hedges 100's	100mm, filter, menthol, (hard pack)	16	1.0	15
	Tareyton 100's	100mm, filter	14	1.1	16
	Pall Mall Light 100's	100mm, filter, menthol	12	1.1	12
	Benson & Hedges Lights 100's	100mm, filter, menthol	16	. 1.1	17
	Salem	king size, filter, menthol	14	1.1	14 .
	Benson & Hedges 100's	100mm, filter, (hard pack)	16	1.1	16
	St. Horitz 100's	100mm, filter	14	1.1	13
	Marlboro 100's	100mm, filter, (hard pack)	16	1.1	16
	Mariboro 100's	100mm, filter	16	1.1	16
	Phillip Morris International 100's		16	1.1	16
	L & M 100's	100mm, filter, (hard pack)	15	1.1	16
		100mm, filter	15		16
	Viceroy Super Longs 100's	100mm, filter	16	' 1.1 1.1	16
	Benson & Budges 100's	100mm, filter	-		
	distant.	king size, filter	ر1	(1.1	16
	lark	king size, filter	14	1.1	14
	Raieigh 100's	100mm, filter	16	1.1	17 12
	Eve Lights 120's	120mm, filter, menthol, (hard pack)	1.4	1.1	•
	Chestetfield 101	101mm, filter	15	1.1	16
	St. Moritz 100's	100mm, filter, menthol	14	. 1.1	14
	Winston	king size, filter, (hard pack)	. 16	1.1	15 .
	Spring 100's	100mm, filter, menthol	17	1.1	18
	Kool	reg. size, non-filter, menthol	19	1.1	14
	Eve Lighta 120's	120mm, filter, (hard pack)	14	1.1	13 .
	Knu1	king size, filter, menthol	16	1.1	17
	Salem 100's	100mm, filter, menthol	15	1.1	14
	Eve 100's	100mm, filter	15	1.2	14
1	Eve 100's	100mm, filter, menthol	. 15	1.2	15
1	Kent 100's	100mm, filter	14	1.2	13
1	Benson & fledges	king size, filter, (hard pack)	15	1.2	12
1	Camel	king size, filter	16	1.2	16
1	Lnrk 100's	100mm, filter	16	1.2	15
1	Pall Holl	king size, filter	18	1.2	18
1	Newport	king size, filter, menthol, (hard pack)	16	1,2	16
- 1	Kooi	king size, filter, menthol, (hard pack)	- 16	1.2	16
- 1	Kent 100's	100mm, filter, menthol	15	1.2	14
1	Pall Mail 100's	100mm, filter	1.7	1.3	. 17
1	Chesterfleld	reg. size, non-filter	21	1.3	13
	Raleigh	king slze, non-filter	22	1.3	17
	Half & Half	king size, filter	16	1.3	15
!	Long Johns 120's	120mm, filter, menthol	16	1.3	1.7
	Newport (king size, filter, menthol	17	1.3	18

TPM dry (tar) - milligrams total particulate matter less alcotine and water.
 Milligrams total alkaloids reported as afcotine.

³ All acores below 0.5 me, "rar." 0.05 me, nicorine and 0.5 mg, carbon monoxide reported as (0.5, (0.05, (0.5, respectively.

Tar¹, Nicotine and Carbon Monoxide Content of Two-Hundred (200)

Varieties of Domestic Cigarettes

(shown in increasing order of nicotine values)

BRAND	TYPE	TAR (mg/ctg)	NICOTINE (mg/clg)	CARBON HONOXIDE
Old Gold Filters	king size, filter	. 17	1.3	19
Tail 120's	120mm, filter, menthol	16	1.4	17
Picayune -	reg. size, non-filter	· 19	1.4	15
Long Johns 120's	120mm, filter	. 18	. 1.4	18
Philip Morris	reg. size. non-filter	21	1.4	12
Winston International 100's	100mm, Filter	· 18	1.4	16
Tall 120's	120mm, filter	17	1.4	19
Camel	reg, size, non-filter	. 21	1.4	13
More 120's	120mm, filter	18	1.4	20
Lucky Strike	reg. size, non-filter	24	1.5	' 17
Call Mall	king size, non-filter	24	1.5	17
Hore 120's	120mm, filter, menthol	18	1.5	20
Old Cold Filters	100mm, filter	20	1.5	` 20
Max 120's	120mm, filter	. 19	1.6	18 .
Newport 100's	100mm, Filter, menthol,	20	1.6	20
Max 120's	120mm, filter, menthol	19	1.6	18
Chesterfield	king size, non-filter	25	1.7	16
English Ovals	reg. size, non-filter, (hard pack)	23	1.7	12
Philip Morris Commander	king size, non-filter	. 27	1.7	15
Herbert Tareyton	king size, non-filter	- 27	1.7	19
Old Gold Straight	king size, non-filter	26	1.0	17
Players	reg. size, non-filter, (hard pack)	24	1.9	14
Bull Durham	king size, filter	29	1.9	24
English Ovals	king size, non-filter, (hard pack)	28	2.1	15

¹ TPM dry (tar) - milligroms total particulate matter less micotine and water.

² Milligrams total alkaloids reported as nicotine.

³ All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as (0.5, (0.05, (0.5, respectively.

Jar 1, Micotim 2 and Carbon Monoxide Content of Two-Bundred (200) Varieties of Domestic Cigarettes (shown in increasing order of carbon monoxide values)

Cambridge 3/	BRAND	Type	TAR (mg/cin)	NICOTINI (mg/cig)	CARBON MONOXIDE (mg/cip)
Carlton 3/	Cambridge 3/	king size, filter, (hard pack)	<0.5	< 0.05	€0.5
Now 20	u-u-i	king size, filter, (hard pack)	₹9.5	<0.05	<0.5 .
Nov. 100's 3/ 100'm, filter, (hard pack)			<0.5	0.1	
Carlton 100's 3/ 100mm, filter, (hard pack) C0.5 O.1 1 Carlton 100's 3/ 100mm, filter, menthol C0.5 O.1 1 I I I I I I I I		100mm, filter, (hard pack)	<0.5	< 0.05	€0.5
Carlton 100's 3/		100mm, filter, (hard pack)	<0.5	0.1	1
Carlton 3/	Carlton 100's 3/	100mm, filter, menthol, (hard pack)	≪0.5	0.1]
Tareyton Ultra Low Tar			. <.0.5	0.1	1
Cambridge 3/		king size, filter, menthol	. 1	0.1	1 .
Champy C	Barelay 4/	king size, filter, (hard pack)		0.1	1 .
	Cambridge 3/	king size, filter	₹0.5	0.1	•
Benson & Redges 3/ rec. size, filter, (hard pack) Co.5 Co.1 1	True Wira One	king size, filter	1.	0.2	
Nov 100's 100m filter 1 0.2 1		king size, filter	1	0.2	-
Now 100's 100mm, filter, menthol 1 0.2 1 1 1 1 1 1 1 1 1	Benson & Redges 3/	reg. size, filter, (hard pack)	< €0.5	0.1	1
Carlton 3/ Barclay 100's 4/ Barclay 100's 4/ Barclay 100's 4/ Barclay 100's 4/ Domm, filter 2 0.3 Triumph Ring size, filter, menthol Rent III Ring size, filter 2 0.3 Rent III Ring size, filter 2 0.3 Triumph Ring size, filter 2 0.3 Triumph Ring size, filter 3 0.4 January 11 Ring size, filter 4 0.4 January 11 Ring size, filter 4 0.4 January 11 Ring size, filter, menthol Ring size, filter, menthol Renti Ultra Lights Ring size, filter, menthol Renti Ultra Ring Ring Ring Ring Ring Ring Ring Ring		100m , filter			1
Barclay 100's 4/ 100mm, filter 2 0.3 2 2 Now		100mm. filter, menthol			•
Barclay 100's 4	Cariton 3/	king size, filter			
Now King size, filter, menthol 2 0.2 3 Now King size, filter, menthol 2 0.3 3 Now King size, filter 2 0.3 3 3 Now King size, filter 2 0.3 3 3 3 3 3 3 3 3 3	Barclay 100's 🛂	1DCmm, filter			
Now		king size, filter, menthol	•		
Note	Triumph	king size, filter, menthol	·· 2		_
Triumph king size, filter 3 0.4 3 Doral II king size, filter 4 0.4 3 Doral II king size, filter, menthol 4 0.4 3 Merit Ultra Lights king size, filter, inenthol 2 0.3 4 Nerit Ultra Lights king size, filter, menthol 2 0.3 4 Nerit Ultra Lights king size, filter 3 0.3 4 Nerit Ultra Lights king size, filter 3 0.3 4 Nerit Ultra Lights king size, filter 3 0.3 4 Nerit Ultra Lights king size, filter 3 0.3 4 Nerit Ultra Lights king size, filter 5 0.4 4 Decade king size, filter, menthol 5 0.4 4 Decade king size, filter 5 0.4 4 Carlton 100's 160mm, filter 5 0.4 4 Caubridge 100's 100mm, filter 3 0.3 4 Caubridge 100's 100mm, filter 3 0.3 5 Winston Ultra king size, filter 4 0.4 5 True king size, filter 4 0.4 5 True king size, filter, menthol 5 0.5 True king size, filter, menthol 5 0.5 True king size, filter, menthol 5 0.5 True king size, filter, menthol 4 0.4 5 Tareyron Lights king size, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.4 6 L & H Lights 100's 100mm, filter 7 0.7 6 L & H Lights 100's 100mm, filter, menthol 7 0.8	Nov	king size, filter .	2		•
	Kent III	king size, filter		-	, -
Doral II	Triumph	king size, filter	3 -		
Merit Ultra Lights	Doral II	king size, filter	4		3
	Doral 11	king size, filter, menthol	4		; 3
Neric Ultra Lights	Merit Ultra Lights	kine size, filter, menthol	•		4
Salem Ultra king size, filter, menthol 3 0.4 4 Decade king size, filter menthol 5 0.4 4 Decade king size, filter 5 0.4 4 Carlton 100's 160mm, filter, menthol 3 0.3 4 Lucky 100's 100mm, filter 3 0.3 4 Cambridge 100's 100mm, filter 3 0.3 5 Winston Ultra king size, filter 4 0.4 5 True king size, filter 4 0.4 5 Carlton 120's 120mm, filter, menthol 5 0.5 5 True king size, filter, menthol 4 0.4 5 Tareyron Lights king size, filter 5 0.4 5 Salem Ultra 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.4 5 Lights 100's 100mm, filter 4 0.4 6 Lights 100's 100mm, filter 7 0.7 6 Lights 100's 100mm, filter, menthol 7 0.8 6	Iceberg 100's	100mm, filter, menthol			4
Decade king size, filter, menthol 5	Meric Ultra Lights	king size, filter			4
Recade	Salem Ultra	king size, filter, menthol			4
Carlton 100's 160mm, filter, menthol 3 0.3 4 Lucky 100's 100mm, filter 3 0.3 4 Cambridge 100's 100mm, filter 3 0.3 5 Winston Ultra king size, filter 4 0.4 5 True king size, filter 4 0.4 5 Carlton 120's 120mm, filter, menthol 5 0.5 5 True king size, filter, menthol 4 0.4 5 Tareyton Lights king size, filter 5 0.4 5 Salem Ultra 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.4 5 L & H Lights 100's 100mm, filter 7 0.7 6 L & H Lights 100's 100mm, filter, menthol 7 0.8 6	Deacade	king size, filter, menthol	*		•
Lucky 100's 100mm, filter 3 0.3 4 Cambridge 100's 100mm, filter 3 0.3 5 Winston Ultra king size, filter 4 0.4 5 True king size, filter 4 0.4 5 Carlton 120's 120mm, filter, menthol 5 0.5 5 True king size, filter, menthol 4 0.4 5 Tareyton Lights king size, filter 5 0.4 5 Salem Ultra 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.5 Triumph 100's 100mm, filter menthol 4 0.5 Carlton 100's 100mm, filter 4 0.4 6 L & H Lights 100's 100mm, filter 7 0.7 6 L & H Lights 100's 100mm, filter, menthol 7 0.8 6	Decade	king size, filter			4
Cambridge 100's 100mm, filter 3 0.3 5 Winston Ultra king size, filter 4 0.4 5 True king size, filter 4 0.4 5 Carlton 120's 120mm, filter, menthol 5 0.5 5 True king size, filter, menthol 4 0.4 5 Tareyton Lights king size, filter 5 0.4 5 Salem Ultra 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.5 5 Carlton 100's 100mm, filter 4 0.4 6 L & H Lights 100's 100mm, filter 7 0.7 6 L & H Lights 100's 100mm, filter, menthol 7 0.8 6	Carlton 100's	160mm, filter, menthol			4
Winston Ultra	Lucky 100's	·	_	_	4
True	Cambridge 100's		3		2
Carlton 120's 120mm, filter, menthol 5 0.5 5 True king size, filter, menthol 4 0.4 5 Tareyton Lights king size, filter 5 0.4 5 Salem Ultra 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.5 Carlton 100's 100mm, filter 4 0.4 6 L & H Lights 100's 100mm, filter 7 0.7 6 L & H Lights 100's 100mm, filter, menthol 7 0.8 6	Winston Ultra	king size, filter	4		3
True king size, filter, menthol 4 0.4 5 Tareyton Lights king size, filter 5 0.4 5 Salem Ultra 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.5 5 Carlton 100's 100mm, filter 4 0.4 6 L & H Lights 100's 100mm, filter 7 0.7 6 L & H Lights 100's 100mm, filter, menthol 7 0.8 6	True	king size, filter	• 4		5
Tareyton Lights king size, filter 5 0.4 5 Salem Ultra 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.5 5 Carlton 100's 100mm, filter 4 0.4 6 L & H Lights 100's 100mm, filter 7 0.7 6 L & H Lights 100's 100mm, filter 7 0.8 6	Carlton 120's	120mm, filter, menthol	5		5 .
Salem Ultra 100's 100mm, filter, menthol 4 0.4 5 Triumph 100's 100mm, filter, menthol 4 0.5 5 Carlton 100's 100mm, filter 4 0.4 6 L&H Lights 100's 100mm, filter 7 0.7 6 L&H Lights 100's 100mm, filter 7 0.8 6	True	king size, filter, menthol	4		3
Triumph 100's 100mm, filter, menthol 4 0.5 5 Carlton 100's 100mm, filter 4 0.4 6 L&H Lights 100's 100mm, filter 7 0.7 6 L&H Lights 100's 100mm, filter 7 0.8 6	Tareyron Lights	king size, filter	5	= = :	5
Carlton 100's 100mm, filter 4 0.4 6 L&H Lights 100's 100mm, filter 7 0.7 6 L&H Lights 100's 100mm, filter 7 0.8 6	Salem Ultra 100's	100mm, filter, menthol	4		3
L&H Lights 100's 100mm, filter 7 0.7 6 L&M Lights 100's 100mm, filter, menthol 7 0.8 6	Triumph 100's		4		
L& H Lights 100's 100mm, filter, menthol 7 0.8 6	Carlton 100's		4		- ,
L & n Lights 100 S 100mm, fixet, mention	L & H Lights 100's		7_		· , ,
Carlton 120's 120mm, filter 6 0.6			7		- ,
	Carlton 120's	120mm, filter	, b	u.c	U

¹ TPH dry (tar) - milligrams total particulate matter less nicotine and water.

² Milligrams total alkaloids reported as nicotine.
3 All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as (0.5, (0.05, (0.5, respectively. 4 See statement in Text conversion Dardley

Tar 1, Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes. (shown in increasing order of carbon monoxide values)

BRAND -	ТҮРЕ	TAR (mg/cig)	NICOTINE (mg/clg)	CARBON MONOXIDE (mg/clg)
Triumph 100's	100mm, filter	4	0.5	6
Pall Mall Extra Light	king size, filter	6	0.5	6
L & H lights	king size, filter	· 8	0.7	7
Camel Lights	king size, filter, (hard pack)	6.	0.6	7
Kent III 100's	100mm, filter	4	0.5	7
Colden Lights 100's	100mm, filter, menthol	7	0.7	7
Kool Super Lights	king size, filter, menthol	6	0.5	7
Tareyton Long Lights 100's	100mm, filter	. 7	0.6	7
Lark Lights 100's	100mm, filter	7	0.6	7
Winston Ultra 100's	100mm, Cilter	5	0.5	7
Decade 100's	100mm, filter	B	0.8	7
	king size, filter	7	0.6	7
Lark Lights	100mm, filter	5	0.5	8
Vantage Ultra Lights 100's	king size, filter, menthol	, Å	0.7	8
Golden Lights		, ,	0,6	B
Virginia Slims Lights 100's	100mm, filter, menthol (hard pack)	. 7	0.7	8 '
Golden Lights	king size, filter	7	0.6	8
Virginia Siims Lights 100's	100mm, filter, (hard pack)	,	0.7	8
American fights 120's	120mm, filter, menthol	, ,	0.7	9
American Lights 120's	120mm, filter	·, 8		9
Arctic Lights	king size, filter, menthol	8	0.6	
True 100's	100mm, filter	1	0.6	9
Pail Mall Light 100's	100mm, filter	9	0.8	9
Colden Lights 100's	100mm, filter	8.	0.8	9
Vantage Ultra Lights	king size, f'iter	6	0.5	9 .
Delair	king size, filter, menthol	8	0.7	9
True 100's	100mm, filter, menthol	8	0.6	9
Silva Thins 100's	100mm, filter, menthol	11	1.0	9
Arctic Lights 100's	100mm, filter, menthol	7 .	0.6	9
Silva Thins 100's	100mm, filter	11	1.0	9
Jacky Ten	king size, filter	8	0.6	9
Salem Lights	king size, filter, menthol	. 8	0.6	10
Newport Lights	king size, filter, menthol	8	0.8	10
Merit	king size, filter, menthol	7	0.5	10
Newport Lights	king size, filter, menthol, (hard pack)	. 8	0.7	10
Vicercy Rich Lights	king size, filter	8	0.7	10
Camel Lights	king size, filter	8	0.7	10
Belair 100's	100mm, filter, menthol	8	0.6	10
Parllament Lights	king size, filter	9	0.6	10
	king size, filter, (hard pack)	9	0.6	. 10
Parliament Lights	king size, filter	7	0.5	to
Merit	king size, filter	10	U.9	10
· Old Gold Lights		8	0.7	11
Raleigh Lights	king size, filter	10	0.7	11
Senson & Sedges Lights 100's	100mm, filter, menthol, (hard pack)	12	0.8	11
Multlfifter	king size, filter, menthol	14	710	**

¹ TPM dry (tor) - milligrams total particulate matter less nicotine and water.

² Hilligrams total alkaloids reported as ulcotine.

³ All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as <0.5, <0.05, <0.5, respectively.

Tar¹, Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes (shown in increasing order of carbon monoxide values)

		TAR .	NICOTINE	CARBON HONOXIDE	
BRAND *	TYPE	(mg/cig)	(mg/cig)	(mg/cig)	
Winston Lights	king size, filter	11	0.9	11	
Parliament Lights 100's	100mm, filter	12	0.9	11	
Salem Lights 100's	100mm, filter, menthol	9	0.8	11	
Benson & Hedges Lights 100's	100mm, filter, (hard pack)	11	0.7	1,1	
MultIfilter	king size, filter	12	0.8	11	
Merit 100's	100mm, filter, menthol		0.7	11	
Vicercy Rich Lights 100's	100mm, filter	ģ	0.8	12	
Marlboro Lights	king size, filter, menthol	10	0.7	12	
	100cm, filter, menthol	10	0.7	12	
Neuson & Hedges Lights 100's	reg. size, non-filter, (hard pack)	23	1.7	12	
English Ovals	100mm, filter, menthol	12 .	1.1	1.2	
Pall Hall Light 100's	· · · · · · · · · · · · · · · · · · ·	9	0.7	12	
Kool Super Lights 100's	100mm, filter, menthol	8	0.7	12	
Vantage 100's	100mm, filter	12	1.0	12	
Kent	king size, filter, (hard pack)	10	0.7	12	
Merit 100's	100mm, filter	. 14	1.1	12	
Eve Lights 120's	120mm, filter, menthol, (hard pack)	-	1.2	12	
Benson & Hedges	king size, filter, (hard pack)	15		12	
Kool Hilds	king size, filter, menthol	11	0.9	12	
Philip Norris	reg. size, non-filter	21	1.4		
Marlboro Lights	king size, filter	11	0.7	12	
Marlboro Lights 100's	100mm, fliter	10	0.7	12	
Vantage	king size, filter	9	0.7	13	
Camel	reg. size, non-filter	21	1.4	13	
Kent	king size, filter	13	1.0	13	
Eve Lights 120's	120mm, filter, (hard pack)	14	1.1	13	
Raleigh Lights 100°s	100mm, filter	9	0.8	13	
Koci Milds 100's	100mm, filter, menthol	12 .	1.0	13	
Benson & Hedges Lights 100's	100mm, filter	10	0.7	13	
Hi-Lite 100's	100mm, filter, (hard pack)	12	0.9	13	
Chesterfleld	reg. size, non-fil r	21	1.3	13	
Galaxy	king size, filter	14	1.0	13	
Alpine	king size, filter, menthol	14	0.9	13	
St. Moritz 100's	100mm, filter	Ī4	1.1	13	
	100mm, filter	14	1.2	13	
Kent 100's	· · · · · · · · · · · · · · · · · · ·	14	0.9	14	
Narlhoro	king size, filter, menthol	15	1.1	14	
Salem 100's	100mm, filter, menthol	15	1.1	14	
Salem	king size, filter, menthol		1.2	14	
Kent 100's	100mm, filter, menthol	15	0.9	14	
Marthorn	king size, filter, menthal, (hard pack)	15		14	
Lark	king size, filter	14	1.1	14	
Players	reg. size, non-filter, (hard pack)	24	1.9	14	
Virginia Slims 100's	100mm, filter, menthol	15	1.0	14	
Winston 100's	100mm, filter	14	1.0	14 14	
St. Moritz 100's	100mm, filter, menthol	14	1.1	LM	

I TPM dry (tar) - milligrams total particulate matter less micotine and water.

² Millgroms total alkaloids reported as micotine.
3 All scores below 0.5 mg. "tar," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported as <0.5, <0.05, <0.5, respectively.

Tar , Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varietles of Domestic Cigarettes (shown in increasing order of carbon monoxide values)

BRAND	түре	TAR (mg/cig)	NICOTINE (mg/cig)	CARBON MONOXIDE (mg/clg)
Vantage	king size, filter, menthol	10	0.7	14 ' .'
Winston Lights 100's	100mm, filter	12	0.9	14
Koo1	reg. size, non-filter, wenthol	19	1.1	14
Eve 100's	100mm, filter	15	1.2	14
Eve 100's	100mm, filter, menthol	1.5	1.2	14 .
I. & M .	king size, filter, (hard pack)	15 '	1.0	14
Mar1boro	king size, filter, (hard pack)	16	1.0	14
Camel Lights 100's	100mm, filter	12 ·	0.9	15
English Ovals	king size, non-filter, (hard pack)	28	2.1	15
Half & Half	king size, filter	. 16	1.3	15 "
L&M	king size, filter	14	1.0	15
Oasis	king size, filter, menthol	15	1.0	15
Lark 100's	100mm, filter	16	1.2	15
Benson & Hedges 100's	100mm, filter, menthol, (hard pack)	16	1.0	15
Picayune	reg. size, non-filter	19	1.4	15
Winston	king size, filter, (hard pack)	16	1.1	15
Philip Morris International 100's	100mm, filter, menthol, (hard pack)	16	1.0	15
Virginia Slims 100's	100mm, filter	15	1.0	15
	king size, filter	iś	1.0	15
Chesterfield	king size, non-filter	27	1.7	15
Philip Morris Commander		16	1.0	15
Marlboro	king size, filter king size, filter	14	1,0	15
TareyLon	• • • • · · · · · · · · · · · · · · · ·	15	1.1	16
Winston .	king size, filter	15	1.1	16
L & M 100's	100mm, Eilter	16	1.1	16
Benson & Hedges 100's	100mm, filter, (hard pack)	15	1.0	16
Saratoga 120's	120mm, filter, menthol, (hard pack)	16	1.1	16
Philip Morris International 100's	100mm, filter, (hard pack)	14	1.0	16
Montelair	king size, filter, menthol	15	1.0	16
Saratoga 120's	120mm, filter, (hard pack)	16 .	1.1	16
Marlboro 100's	100mm, filter, (hard pack)	15	1.0	16
Vicetoy	king mize, filter	14	1.0	16
Kool Super Longs 100's	100mm, filter, menthol	16	1.2	16
Came 1	king size, filter	16	1.2	16
Newport	king size, filter, menthol, (hard pack)	25	1.7	16
Chesterfield	king size, non-filter	14	1.1	16
Tareyton 100's	100mm, filter	16	1.1	16
Marthoro 100's	100mm, filter	15	1.1	16
Chesterileld 101	100mm, filter	16	1.1	16
Benson & Hedges LOO's	100mm, filter	16	1.2	16
Kool	king size, filter, menthol, (hard pack)		1.4	16
Winston International 100's	100mm, filter	18 15	1,1	16
Vicercy Super Longs 100's	100mm, Cilter	16	1.1	17
Kool	king size, filter, menthol	16	1.1 1.1	17
Benson & Hedges 100's	100mm, filter, menthol	10	T · T	1.7

¹ TPM dry (tar) - milligrams total particulate matter less nicotine and water.
2 Milligrams total alkaloids reported as nicotine.
3 All scores below 0.5 mg, "tar," 0.05 mg, nicotine and 0.5 mg, carbon monoxide reported as \$\langle 0.5, \$\langle 0.05, \$\langle 0.5, \$\l

Tar¹, Nicotine and Carbon Monoxide Content of Two-Hundred (200) Varieties of Domestic Cigarettes (shown in increasing order of carbon monoxide values)

BRAND .	TYPE	TAR (mg/cig)	NICOTINE (mg/clg)	CARBON MONOXIDE (mg/cig)
Raleigh 100's	100sm, Etlter	16	1.1	17
Long Johns 120's	120mm, filter, menthol	· 16	1.3	17
Pall Hall	king size, non-filter	- 24	1.5	17
Raleigh	king size, non-filter	. 22	1.3	17
Dullaurier	king size, filter, (hard pack)	15 .	1.0	17
Lucky Strike	reg. size, non-filter	24	1.5	17
Tall 120's	120mm, filter, menthol	16	1.4	17
Old Gold Straight	king size, non-filter	26	1.8	17
Rateigh	king size, filter	, 15	1.0	17.
Pali Mali 100's	100mm, filter	17	1.3	17
Spring 100's	100mm, filter, menthol	19 -	1.1	18
Max 120's	120mm, filter	. 19	1.6	18
Max 120's	. 120mm, filter, menthol	19	1.6	19
Newport	king size, fliter, menthol	17·	1.3	18
Pall Mall	king size, filter	18 .	1.2	18
Long John 120's	120mm, filter	18	1.4	18
Tall 120's	120mm, filter	17	1.4	19
Old Gold Filter	king size, filter	17	1.3	19
Herbert Tareyton	king size, non-filter	27	1.7	19
Newport 100's	100mm, filter, menthol	. 20	1.6.	20
More 120's	120mm, filter, menthol	18	1.5	20
Old Gold Filter 100's	100mm, filter	? 20 ′	1.5	20
More 120's	120mm, filter	18	1.4	20
Bull Durham	king size, filter	29	1.9	24

l TPM dry (tar) - milligrams total particulate matter less nicotine and water. 2 Milligrams total alkaloids reported as nicotine.

³ All scores below 0.5 mg. "ter," 0.05 mg. nicotine and 0.5 mg. carbon monoxide reported ss <0.5, <0.05, <0.5, respectively.